CUMULATIVE AUTHOR INDEX
Journal of Economic Entomology
Volume 102, 2009

A

Abad-Moyano, R., 144
Abel, C. A., 381, 699, 1599
Abellán, J., 393
Abidha, S., 1423
Adams, L., 381
Addesso, K. M., 257
Adelaja, A. O., 237
Adler, L. S., 1101
Ahmed, E., 999
Aiken, R. M., 1281
Akbar, W., 1054
Akin, D. S., 1827, 2109
Akinkurolere, R. O., 610
Alfaro, C., 1094
Ali, M. I., 1935
Alinia, F., 1189
All, J., 1497
Alm, S. R., 388, 1203, 1891
Almeida, A.M.R., 1209
Almeida, R.P.P., 493, 897
Alonzo, T. A., 1985
Alphey, L., 717
Alphey, N., 717
Aluja, M., 86, 2268
Alyokhin, A., 2078
Alzogaray, R. A., 1383
Amimo, F. A., 2056
Ancona-Xiu, P., 1737
Andow, D. A., 381
Anfora, G., 974
Armstrong, J. S., 183
Armstrong, J. W., 522, 1859
Arredondo, J., 86
Arthur, F. H., 1673, 1992
Artiaga-López, T., 542
Ashouri, A., 595
Athanassiou, C. G., 836, 1352, 1673
Audino, P. G., 1546
Audonnet, J.-C., 366
Azuara-Domínguez, A., 381

B

Bacheler, J. S., 1344
Bagnères, A.-G., 347
Bagwell, R. D., 1827, 2109
Bamba, J. P., 1431
Bandani, A., 595
Bandara, K.A.N.P., 999
Banos, C., 1791
Barak, A. V., 913
Barbour, J. D., 274
Barker, S. C., 373
Barr, N. B., 401, 2325, 2333
Barrett, K., 20
Barry, J. D., 659
Bartels, D. W., 2160
Baur, M. E., 1209
Baxter, I. H., 453
Beaudoin, A.L.P., 30
Beavers, M., 20
Beers, E. H., 324
Behle, R. W., 1759
Bell, A. A., 36
Bennett, G. W., 1580, 1614
Bentz, S. E., 1247
Berenbaum, M. R., 474
Beres, B. L., 2137
Beresford, D. V., 788
Bergh, J. C., 1085
Berkvens, D., 616
Bernklau, E. J., 558
Beudjekian, S., 2084
Beuzelin, J. M., 1054
Bextine, B., 1743
Bi, J. L., 855
Bielza, P., 393
Billah, M. K., 981
Bishop, B.J.B., 2041
Bjostad, L. B., 558
Blanco, C. A., 381, 1599
Blinka, E. L., 1344
Blouin, D. C., 1054
Bohn, M. O., 1317, 2350
Boina, D. R., 685
Boller, E. F., 2268
Bond, J., 1837
Bonsall, M. B., 50, 717
Borgemeister, C., 1559
Borkakatti, R., 2217
Borys, R. R., 1846
Bostanian, N. J., 2084
Boucher, J., 1101
Bourgeois, A. L., 1233
Boutard-Hunt, C., 2183
Boyer, S., 610
Boykin, L. M., 750
Bradshaw, J. D., 2154
Brady, J., 1743
Braganza, N., 127
Brainard, D. C., 115
Braman, S. K., 1116, 1151
Braxton, L. B., 1301
Bremer, E., 2137
Brentassi, M. E., 1801
Brévault, T., 2301
Brewster, A.L.E., 105
Brewster, C. C., 2146
Brightwell, R. J., 1170
Brockerhoff, E. G., 79
Brooks, D. J., 274
Broughton, S., 646
Brown, C. R., 1649
Bruck, D. J., 466, 624
Brunet, S., 366
Bryant, R. J., 2224
Budia, F., 1490
Buntin, G. D., 1262, 1960
Burkness, E. C., 677, 1874
Burns, R. E., 552
Buss, E. A., 309
Buteler, M., 1009
Butler, R. C., 1468
Büyükgüzel, E., 152
Byers, J. A., 815
Byrne, F. J., 670

C

Caceres, C., 941
Calderone, N. W., 485
Cárcamo, H. A., 2137
Cardona, C., 1309
Carlson, G. R., 1009
Carmichael, A., 398
Carmona, A., 1737
Carrière, Y., 1224, 2011, 2301
Carrillo, D., 905
Cartea, M. E., 767
Castañera, P., 144
Castro, A. M., 1801
Catchot, A. L., 1827, 2109
Cavanagh, A., 1101
Cazares, C. L., 954
Ćetković, A., 836
Chakravarthy, A. K., 1628
Chandler, K. J., 1523
Chang, C. L., 203
Chapman, A. V., 287
Charlet, L. D., 1281
Chastagner, G. A., 69
Chau, A., 1896
Chaudhury, M. F., 799
Chen, A. C., 373
Chen, H., 610
Chen, J., 1393
Chen, M., 2217
Chen, Mao, 115, 2241
Chen, M. H., 2209
Chen, M.-S., 774, 1663
Chen, X.-X., 1039
Chen, Y., 1262
Cherry, R. H., 432
Chi, H., 595
Cho, I. K., 203
Choban, R., 2078
Chong, K.-F., 1586

Chow, A., 1896
Chueca, P., 144, 296
Clark, T. L., 743
Clarke, S. R., 196, 1062
Clayton, G. W., 219
Clément, J.-L., 347
Clodius, M., 2126
Cloyd, R. A., 1567, 1750, 2198
Collins, S. R., 1791
Colunga-Garcia, M., 237
Compton, D. L., 1759
Conroy, L., 177
Cook, D. R., 1827, 2109
Cook, P., 552
Cooper, S. G., 1270
Cordero, C., 1070
Cormier, H. J., 1054
Cornelius, M. L., 1175
Corrales, C., 1801
Corso, I. C., 1209
Cosme, L. V., 170
Costamagna, A. C., 2101
Cottrell, T. E., 1262
Coudron, T. A., 558
Cowles, R. S., 388, 1203
Crook, D. J., 2160
Cruz, Z. T., 127, 1431
Cruz-López, L., 585, 2072
Currie, R. W., 1729

D

Daane, K. M., 2233
Daberkow, S., 868
Dabney, C. P., 1846
D'Amico, V., 1725
Daojian, Y., 913
Darr, M., 2255
Dashiell, K. E., 1317, 2350
da Silva, J. J., 1209
Daves, C. A., 1827, 2109
Davidson, M. M., 1468
Davies, A. P., 1018
Davis, R. W., 347
De Cristofaro, A., 974
de Graaf, J., 1448
de Guzman, L. I., 13
Del Estal, P., 1490
De Lucca, A. J., II, 1175
Dembilio, O., 144
de Oliveira Negrao Lopes, I., 1209
De Pauw, E., 616
Díaz-Fleischer, F., 86, 2268
Di Bernardo, A., 1808
DiFonzo, C. D., 2101
Dively, G. P., 287
Dixon, A.F.G., 1801
Dixon, P. M., 2101
Djihinto, A. C., 1928
Dŏgramaci, M., 1649
Dolan, M. C., 2316
Dorn, S., 2209
Dosdall, L. M., 219
Dou, W., 1705
Douches, D. S., 1270
Doughty, H., 1915
Downes, S., 733
Dreves, A. J., 274
Du, Y. Y., 196
Duke, S., 183
Dunley, J. E., 324
Dutta-Gupta, A., 2343

E

Echegaray, E., 774
Edmunds, A.J.F., 2268
Eganathan, P., 1197
Eisenback, J. D., 602
Ekesi, S., 981
El-Bouhssini, M., 1663
El Khishen, A. A., 1607, 2350
El-Salamouny, S., 1767
El-Sayed, A. M., 815
El-Zemaity, M. E.-S., 1891
Endersby, N., 2217
Enstrom, P. C., 934
Epsky, N. D., 2371
Epstein, M., 2333
Espino, L., 1536
Esquivel, J. F., 36
Etebari, K., 1189
Evans, T. A., 121
Everich, R., 20

F

Fabrick, J. A., 1224
Fadamiro, H. Y., 1908
Farrar, R. R., Jr, 1767
Favret, C., 398
Feng, H., 95
Fernández, E., 393
Fettig, C. J., 1846, 2170
Figueroa, J.-I., 1490
Fisher, G. C., 274
Flanagan, J. W., 1054
Flanders, C. P., 1396
Fleischer, S. J., 287
Fletcher, J., 1417
Flinn, P. W., 1369, 1377, 1696, 1714
Flint-Garcia, S. A., 1317
Flores, A. P., 960
Flores, D., 2325
Flores, S., 86, 542
Follett, P. A., 921, 1399, 1859
Foster, R., 2289
Frake, A. M., 13
Francese, J. A., 2160
Fraser, I., 2048, 2160
French, B. W., 2350
Fukuda, S., 493
Funderburk, J., 887
Funes, H., 1546
Furlong, M. J., 1336

G

Galle, C. L., 1567
Galvan, T. L., 677
Ganchev, T., 1681
Gao, Y., 1217
Gardner, W. A., 2279
Gassmann, A. J., 1224
Gatton, M. L., 507
Gawlak, M., 1691
Ge, L.-Q., 1506
Gent, D. H., 274
Ghadamyari, M., 1189
Gharalari, A. H., 1032
Gibb, T., 1580
Giles, K. L., 774
Gilles, G. J., 1301
Gilley, J., 1032
Gilligan, T. M., 2333
Giorio, C., 1808
Girolami, V., 1808
Glinwood, R., 999
Goebel, J. M., 1750
Gómez, B., 1490
Gore, J., 699
Gould, F., 1217, 1599
Grafius, E. J., 1270
Grafton-Cardwell, E. E., 296, 574
Grant, A. K., 1044
Grávalos, C., 393
Gray, M. E., 2154
Greatti, M., 1808
Green, P., 373
Greene, J. K., 229, 1344, 2360
Groot, A., 381
Grosman, D. M., 1062
Groves, R. L., 960
Gu, H., 1506
Guedes, R.N.C., 170
Guerra, F. P., 1070
Gui, Z., 1591
Guillemette, R., 2078
Guillén, M., 574
Gujar, G. T., 2217
Gunnarson, R. D., 624
Guoping, Z., 913
Gut, L. J., 315, 1108

H

Haack, R. A., 237, 1075
Hagler, J. R., 960
Hagmann, L., 2268
Haile, F. J., 1497
Hall, D. G., 247, 446, 992, 2325
Hallett, R. H., 2241
Hallman, G. J., 64
Hamilton, A. J., 1336
Hamilton, G. C., 1133
Hamud, S. M., 1846
Hane, D. C., 1649
Hannon, E. R., 1224
Harding, C., 2126
Harker, K. N., 219

Harrell, D., 1837
Harris, C. R., 177
Haubruge, E., 616
Hayes, C. J., 2170
Haymer, D. S., 1239
Haynes, K. F., 2310
Hazzard, R., 1101
He, H., 373
Headrick, D. H., 574
Headrick, H. L., 43
Heath, R. R., 2371
Heimpel, G. E., 133
Heinz, K. M., 1896
Hellmich, R. L., 64, 781
Heraty, J. M., 574
Herbert, D. A., Jr, 1915, 1344
Hernández, E., 542
Hernandez, G., 381
Herron, G. A., 646
Hibbard, B. E., 558, 1317, 1607, 2350
Hirai, N., 2265
Hoddle, C. D., 1460
Hoddle, M. S., 1460
Hodges, G., 670
Hodgson, E. W., 2101
Hoepting, C. A., 115
Hoff, F., 868
Hoffmann, E. J., 1864
Hofland, M. L., 1009
Hogendorp, B. K., 2198
Hollingsworth, R. G., 69
Holm-Mueller, K., 467
Holt, K., 336
Holtzer, T. O., 533
Hood-Nowotny, R., 941
Hooks, C.R.R., 493, 897
Hope, J., 347
Horton, D. R., 43
Hou, C., 1591
Hsu, J.-C., 1239
Hsu, Y.-T., 160
Hu, J.-H., 1506
Hu, X., 1781
Huang, C.-G., 1239
Huang, J. G., 1444
Huang, T.-I., 309
Hummel, J. D., 219
Hunt, T. E., 187
Hurter, J., 2268
Hussien, M. I., 1891
Hutchison, W. D., 677, 1874, 2289
Hwang, S.-Y., 160, 1774

I

Il'ichev, A. L., 315
Inta, R., 121
Ioriatti, C., 974
Isaacs, R., 637, 692, 1108
Islam, A., 941

J

Jackson, C., 453
Jackson, R., 699
Jacobson, A., 2289
James, D. G., 274
James, R. R., 1407
Jang, E. B., 815
Jansky, S. H., 422
Jasinski, J., 2255
Jenson, E. A., 1992
Jeske, D. R., 1970
Jilani, G., 2233
Jin, B., 1591
Johnson, D. T., 2192, 2224
Johnson, J. A., 2003
Johnson, K. D., 1816, 2101
Johnson, M. W., 960, 2233
Johnson, R. M., 474
Jones, D. C., 43
Jones, S., 373
Jordan, R. A., 2316
Jordan, T. A., 2146
Joseph, S. V., 1116, 1151
Jovanović, S., 836
Julier, H. E., 563
Jung, J. K., 1389
Jurat-Fuentes, J. L., 1599
Jyoti, J. L., 1044

K

Kač, M., 1440
Kahn, N. D., 30
Kain, W. C., 115
Kalia, V., 2217
Kalscheur, N. A., 1567
Kamble, S. T., 1922
Kamminga, K. L., 1915
Kang, J., 2096
Kang, S.-T., 1389
Karchesy, J. J., 2316
Kasina, J. M., 467
Katary, A., 1928
Kato, K., 629
Kavallieratos, N. G., 836, 1352
Kavousi, A., 595
Kay, B. H., 507
Keith, S. R., 1567
Kemp, K. E., 1567, 1750
Kendra, P. E., 2371
Kennedy, G. G., 30
Kerr, P. H., 2333
Khan, M. A., 2233
Khan, S. A., 1654
Kim, H. J., 1336
Kim, K. S., 759
Kinnee, S., 2333
Klavons, J. A., 804
Klein, M. G., 1551
Knolhoff, L. M., 1
Knutson, A., 774
Koehler, P. G., 1182
Komuro, J., 2265
Kontodimas, D., 1681
Koppenhöfer, A. M., 1325
Korb, P., 868
Korie, S., 515
Kraemer, M., 467
Krugner, R., 960
Krupke, C. H., 2096, 2289
Kuhar, T. P., 287, 1915
Kumar, V., 999
Kumari, A., 2217

L

Lacey, L. A., 43, 2041
Lai, J.C.S., 121
Lamb, P., 1009
Lance, D. R., 2160
Landolt, P. J., 69
Lapointe, S. L., 992
Lassiter, R. B., 1301
Laszlo, J. A., 1759
Laub, C. A., 2146
Lauzière, I., 1743
Lawson, D. S., 1032
Lax, A. R., 1175
Lay, J. O., 2224
Lazzari, S., 1291
Ledezma, L. A., 2333
Lee, C.-Y., 1586
Le Meter, C., 366
Leonard, B. R., 1301, 1497, 1827, 2109
Leonard, R., 381
Leskey, T. C., 1085
Leslie, T. W., 287
Lester, P. J., 533
Lewis, B. A., 2224
Lewis, E. E., 602
Lewis, L. C., 624
Li, B., 1781
Li, M., 1591
Li, Q. X., 203
Li, W. O., 1444
Li, X.-F., 357
Liansheng, H., 750
Lim, E., 558
Lin, G.-C., 1239
Lin, K., 913
Lindroth, E., 743
Liu, H., 1781
Liu, T., 1591
Liu, X., 1663
Liyanage, R., 2224
Lohmeyer, K. H., 804, 809
López, F., 1309
López, J. D., Jr, 381
López-Guillén, G., 954
Lorenz, G. M., 1827, 2109
Lovisa, M. P., 1175
Lu, K.-H., 1774
Lucchi, A., 974
Luck, R. F., 1970
Luttrell, R. G., 229, 1935

Lux, S. A., 981
Lv, X.-Z., 1039
Lyn, M., 1175

M

Ma, J., 1781
Macedo, T. B., 412
MacRae, T. C., 1640
Magalhães, L. C., 170, 187
Mahon, R. J., 708, 733
Malarvannan, S., 1197
Malo, E. A., 585, 2072
Malone, S., 1915
Manandhar, R., 493, 897
Mangan, R. L., 1157, 1472
Mankin, R. W., 1523
Manley, A., 1654
Manning, M. C., 2316
Mannion, C., 1141
Margolies, D. C., 336
Marois, J. J., 887
Martin, C. G., 1141
Martínez, A.-M., 1490
Martinez-Rocha, L., 324
Marzaro, M., 1808
Mashtoly, T. A., 1891
Mason, K., 692
Mastro, V. C., 2048, 2160
Mau, R.F.L., 552, 1123
Max, J., 1559
Mayr, L., 941
Mazzon, L., 1808
Mazzoni, V., 974
Mburu, J., 467
McAuslane, H. J., 257, 432
McCubrey, R., 1291
McElfresh, J. S., 574, 1460
McGraw, B. A., 1325
McGregor, E., 2084
McKelvey, S. R., 1846
McKenzie, C. L., 670, 750
McKnight, S., 1580
McPherson, R. M., 1640
Meagher, R. L., 2154
Medrano, E. G., 36
Meihls, L. N., 558
Mello, A.F.S., 1417
Merrill, L. D., 2170
Merrill, S. C., 533
Mian, M.A.R., 1389
Michaud, J. P., 1044
Michel, A. P., 1389
Michels, G. J., Jr, 1624
Mignon, J., 616
Mihail, S. B., 1352
Miles, J. W., 1309
Millar, J. G., 574, 1460
Miller, D. R., 8
Miller, G. L., 398
Miller, J. A., 804, 809
Miller, J. F., 1281
Miller, J. R., 2056, 2061
Mitchell, F. L., 1743
Mittal, A., 2217
Moltó, E., 296
Montgomery, M. E., 1247
Montón, H., 144
Montoya, J., 1309
Montoya, P., 86
Moo-Valle, H., 1737
Moreira, J. A., 574
Moreno, A. T., 1472
Mori, N., 1808
Morishita, M., 2296
Morse, J. G., 855, 960, 1948
Moyseenko, J. J., 304, 1551
Mulder, P. G., Jr, 759
Muniappan, R., 127, 1431
Munyaneza, J. E., 1032
Murray, M., 366
Murugan, M., 1654
Musser, F. R., 1726, 1827, 2109
Myers, S. W., 2048

N

Nagata, R. T., 432
Nagoshi, R. N., 210, 2154
Nakas, C. T., 1985
Nansen, C., 453, 1009, 1032
Nault, B. A., 2183
Navarro-Llopis, V., 1094
Naveh, V. H., 595
Nawrot, J., 1691
Nay, J. E., 948
Naz, F., 1431
Nderitu, P. W., 981
Nechols, J. R., 336, 1992
Nelson, L. J., 1846
Neven, L. G., 43
Nguyen, B. K., 616
Nguyen, R., 2325
Nguyen, T.H.N., 1559
Ni, X., 412, 1262, 1960
Nichols, R. L., 36
Nielsen, A. L., 1133
Ninkovic, V., 999
Nolting, S. P., 1301
Nowaczyk, K., 1691
Nunez, M., 1536

O

Obrepalska-Steplowska, A., 1691
O'Donovan, J. T., 219
Oehler, D. D., 809
Ohnesorg, W. J., 1816
Oishi, D. E., 69
Oldroyd, B. P., 480
Olejarski, P., 1691
Oliveira, R., 265
Oliver, J. B., 304, 1551
Olmstead, D., 652
Olsen, K. M., 708
Olsen, R. T., 1247
Onagbola, E. O., 685
O'Neal, M. E., 1816, 2101
Onstad, D. W., 1
Opit, G. P., 336, 1360, 1369, 1377, 1673, 1696, 1714
Ortega, L. D., 1482
Osborne, L. S., 670
Osekre, E. A., 887
Otis, G. W., 105
Ouagoussounon, I., 515
Oxley, P. R., 480
Ozkan, E., 2255

P

Padilla, G., 767
Padmasree, K., 2343
Pak, W. S., 1336
Palousek Copeland, A. L., 1624
Papachristos, D. P., 1985
Papadopoulos, N. T., 1985
Pappas, R. S., 1551
Parida, A., 1197
Park, Y.-L., 2026, 2090
Parker, R., 381
Parker, T. L., 733
Pascual-Ruiz, S., 144
Patil, S. U., 1628
Patrian, B., 2268
Patterson, T. G., 1301
Paull, R. E., 69
Pawson, S. M., 79
Payne, G., 381
Payton, T. L., 440
Peairs, F. B., 533, 1954
Pearson, R., 1536
Peck, D. C., 652
Peña, J. E., 905
Pendleton, B. B., 1624
Pereira, R. M., 1182
Perera, O. P., 381, 1599
Perez, E. A., 493
Perez, E. P., 897
Perret, J., 336
Perring, T. M., 948
Persad, A. B., 927
Peterson, R.K.D., 412
Petrice, T. R., 1075
Pettersson, J., 999
Pfiester, M., 1182
Pichon, A., 347
Piesman, J., 2316
Pina, T., 144
Pineda, S., 1490
Piñero, J. C., 552, 1123
Pirard, C., 616
Pittendrigh, B., 2289
Pitts-Singer, T. L., 1407
Piubelli de Moraes, G. C., 1209
Poehling, H.-M., 1559
Polk, D. F., 659
Pollock, H. S., 474
Polston, J. E., 1482
Poopathi, S., 1423

Potamitis, I., 1681
Potter, B. D., 2101
Potter, D. A., 2192
Potter, M. F., 2310
Pound, J. M., 804, 809
Powell, C. A., 750
Prasad, E. R., 2343
Prasifka, J. R., 781, 2154
Precheur, R., 2255
Primo, J., 1094
Prischmann-Voldseth, D. A., 1317, 2350
Prudent, P., 1928, 2301
Pszczolkowski, M. A., 2224
Pufke, U. S., 1018
Puterka, G. J., 1954

Q

Qin, G., 1591
Quezada-Euán, J.J.G., 1737
Qureshi, J. A., 247, 2325

R

Racette, G., 2084
Ragsdale, D. W., 2101
Rajalakshmi, S., 1197
Rajanna, D., 1628
Ramesh, K., 2217
Ramírez, C. C., 1070
Ramoutar, D., 388, 1203
Randolph, T. L., 1954
Rangasamy, M., 432
Ranger, C. M., 304, 1551
Ranwala, D., 1767
Rasgado, M. A., 585
Rathinasabapathi, B., 432
Rauf, A., 2217
Ravuiwasa, K. T., 1774
Ray-Chandler, A., 1291
Reagan, T. E., 1054
Reay-Jones, F.P.F., 2360
Reddy, G.V.P., 127, 1431
Reding, M. E., 304, 927, 1551
Reese, J., 1291
Reeves, R. B., 2360
Rehman, J. U., 2233
Reimer, N. J., 69
Reitz, S. R., 500
Ren, Y., 1705
Reyes, J., 2268
Rhainds, M., 1164
Richardson, M., 2192
Rinderer, T. E., 13, 1233
Roberts, P. M., 1344
Robinson, A., 941
Robinson, L. J., 855
Rodriguez-Saona, C. R., 659, 759
Rogers, M. E., 247, 905
Rojas, J. C., 585, 954, 2072
Rojht, H., 1440
Romero, A., 2310
Rondon, S. I., 1649
Rosas-García, N. M., 58
Roulston, T. H., 563
Royer, T. A., 774
Rudolph, J. B., 1954
Ruffolo, D., 2316
Rugman-Jones, P. F., 855, 1948
Rung, A., 8
Runyon, J. B., 1009
Russell, D., 2217
Russell, T. L., 507
Rust, M. K., 1396
Rwomushana, I., 981
Ryan, P. A., 507

S

Sadof, C., 1164
Saegerman, C., 616
Sage, O., 2333
Sakamoto, Y., 2265
Salyani, M., 685
Samson, P. R., 1523
Sánchez, E. R., 1737
Sappington, T. W., 759
Satyan, R. S., 1197
Sawyer, A. J., 2160
Schaffer, B., 1141
Scheffer, S. J., 8
Schiller, C., 20
Schlindwein, C., 265
Schmidt, J. P., 2316
Schneider, M.-I., 1490
Schnell, E. Q., 2371
Schoenick, C. A., 934
Schultz, P. B., 287
Schulze, C. J., 2316
Schulze, T. L., 2316
Schuppe, H., 453
Schuster, D. J., 257, 1482
Scott-Dupree, C. D., 177
Seagraves, M. P., 1723
Sears, M. K., 2241
Seiler, G. J., 1281
Sendi, J. J., 1189
Seybold, S. J., 1846
Shah, P. K., 1970
Shapiro, J. P., 500
Shapiro, M., 1767
Shapiro-Ilan, D. I., 1759
Shatters, R. G., Jr, 670, 750
Shelton, A. M., 115, 2217, 2241
Shen, T.-C., 160, 1774
Shen, Z., 1217
Shen, Z. J., 196
Shepard, B. M., 1767
Shi, G. L., 196
Shibuya, T., 2265
Shirk, P. D., 500
Shufran, K. A., 440
Shurley, W. D., 1515
Siebert, M. W., 1497
Siegert, P. Y., 2056, 2061
Siegfried, B. D., 187, 781, 1922
Silverman, J., 1170
Simmons, A. M., 1724
Simon, R., 422
Sinzogan, A., 515
Sisterson, M. S., 1224
Skoda, S. R., 799
Slansky, F., 257
Sloderbeck, P. E., 774
Smagghe, G., 1490
Smart, C. D., 2183
Smith, C. M., 1255, 1291, 1654
Smith, J. F., 229
Snape, J. W., 1801
Snodgrass, G. L., 699
Soll, M., 366
Son, Y., 2026
Song, F., 2116
Sosa-Gómez, D. R., 1209
Sotelo, G., 1309
Sotelo, P., 1255
Spomer, N. A., 1922
Spooner, D. M., 422
Spurgeon, D. W., 183
Squartini, A., 1808
Srinivasan, R., 2217
Stahlman, P. W., 1044
Stamenković, S., 836
Stanisavljević, L. Ž., 836
Stansly, P. A., 247, 257, 2325
Stark, J. D., 139, 552
Starkey, S., 1255, 1291, 1654
Starý, P., 836
Steffey, K. L., 2154
Steinkraus, D. C., 2192
Stelinski, L. L., 315, 685
Stewart, S. D., 1827, 2109
Stock, S. P., 1224, 1726
Stout, M. J., 1837
Stouthamer, R., 855, 1948
Strange, J. P., 485
Studebaker, G. E., 1827, 2109
Suckling, D. M., 815
Suh, C. P.-C., 183
Suiter, D. R., 2279
Sumerford, D. V., 381, 624, 781
Sun, J. H., 196
Sutcliffe, J. F., 788
Swiader, J. M., 2198
Swinton, S. M., 2101, 2116
Switzer, P. V., 934
Szendrei, Z., 759

T

Tabashnik, B. E., 1224, 2011
Takakura, K.-I., 1977
Talbert, L. E., 1009
Talebi, K., 595
Talley, R. R., 324
Tang, J., 522
Tapparo, A., 1808
Tarelli, G., 1383
Tarpy, D. R., 2033

Taylor, P. W., 1791
Teixeira, L.A.F., 692, 1108
Temeyer, K. B., 373
Tenorio, J., 1431
Terán-Vargas, A. P., 381
Teulon, D.A.J., 1468
Teutsch, C., 2146
Thaler, J., 2183
Thirionet, B., 616
Thomas-Odjo, A., 515
Thompson, S., 1482
Throne, J. E., 1360, 1369, 1377, 1673, 1691, 1696, 1714
Timmons, N. R., 1750
Tindall, K. V., 1497, 1827, 1837, 2109
Tiwari, S., 602, 2146
Tobin, P. C., 2090
Toda, S., 2296
Toews, M. D., 1344, 1515, 2360
Toledo, J., 542, 585, 2072
Tomanović, Ž., 836, 1352
Torres-Ortega, J. A., 58
Trdan, S., 1440
Trona, F., 974

U

Uijtewaal, B., 2217
Underwood, R. M., 1729
Upton, W. W., 1062
Urbaneja, A., 144

V

Vacas, S., 1094
Vaissayre, M., 1928, 2301
Valdovinos-Núñez, G. R., 1737
Vales, M. I., 1649
Valle-Mora, J., 954
Vanaclocha, P., 144
Vanderpoppen, R., 1884
Vandervoort, C., 1864, 1884
Van Duyn, J. W., 1301, 1344
van Herk, W. G., 2126
Van Rensburg, J.B.J., 2011
Van Timmeren, S., 637
Vargas, R. I., 139, 552, 1123
Vasquez, J. D., 2333
Vassal, J.-M., 1928
Vaughn, K., 1032
Vaughn, T. T., 1607
Vayias, B. J., 1352
Vayssieres, J.-F., 515
Vazquez, A., 2371
Vega-Aquino, P., 1599
Velasco, P., 767
Verheggen, F. J., 616
Vernon, R. S., 2126
Vetter, R. S., 1396
Vijaykumar, L., 1628
Vilar, M., 767
Villareal, J., 2371
Villegas-Mendoza, J. M., 58
Viñuela, E., 1490
Voegtlin, D. J., 398
Voothuluru, P., 1255

W

Walgenbach, J. F., 1085
Walker, E. D., 2056, 2061
Walker, W., 1182
Walton, V. M., 274
Wang, C., 1580, 1614
Wang, H., 774, 1663
Wang, H. X., 196
Wang, J.-J., 1705
Wang, K.-H., 493, 897
Wang, P., 115
Wang, S., 522
Wang, X.-G., 2233
Wang, Y. N., 196
Wantuch, H. A., 2033
Waters, E. K., 1336
Watson, G. W., 855
Watt, M. S., 79
Way, M. O., 1536
Wayadande, A. C., 1417
Wearing, C. H., 815
Weathersbee, A. A., III, 2325
Weaver, D. K., 412, 1009
Wei, X.-Q., 1705
Weidong, Y., 913
Weiland, A., 1954
Weinzierl, R., 2289
Weldon, C. W., 1791
West, T. P., 2090
Whalen, J., 287
White, J. B., 2026, 2090
Whitehead, J., 20
Whitworth, R. J., 774
Widart, J., 616
Wiedenmann, R. N., 2192
Wilde, G. E., 1255
Williams, K. A., 336
Williams, K. S., 1175
Willrich Siebert, M., 1301
Wilson, J. P., 1960
Wiltz, B. A., 2279
Wise, J. C., 1108, 1864, 1884
Wood, B. W., 1262
Wood, T. N., 2192
Wright, D. L., 887
Wright, L. C., 274
Wright, M. G., 493
Wu, B., 95
Wu, J.-C., 1506
Wu, K., 95, 133, 1217
Wu, Q.-J., 357
Wu, W.-J., 1239
Wu, X., 95
Wu, Y. D., 2217
Wyckhuys, K. A.G., 133

X

Xiao, Y., 1908
Xingyuan, L., 913
Xu, B.-Y., 357
Xu, H. H., 1444
Xu, P., 1039

Y

Yakob, L., 50
Yang, G.-Q., 1506
Yao, S.-T., 1039
Yee, W. L., 2041
Yi, J., 913
Yin, X.-H., 357
Yokomi, R. K., 1417
Youngman, R.-R., 602, 2146
Youssef, N. N., 304, 1551

Z

Zalom, F. G., 2233
Zalucki, M. P., 1018
Zarzo, M., 1094
Zee, F. T., 1859
Zerba, E. N., 1383, 1546
Zettler, J. L., 2003
Zhang, A., 1085
Zhang, H., 610
Zhang, R., 1781
Zhang, W., 1389
Zhang, Y., 133
Zhang, Y.-J., 357
Zhao, J. Z., 2217
Zhao, L. L., 196
Zheng, Y.-L., 1039
Zhilin, C., 913
Zhou, L. J., 1444
Zibaee, A., 1189
Zou, Y., 1460
Zuñiga, R. E., 1070
Zylstra, K. E., 2160

CUMULATIVE KEY WORD INDEX
Journal of Economic Entomology
Volume 102, 2009

A

A. m. carnica,
  A. m. caucasica, 480
  bee breeding, 480
  genetic diversity, 480
  phylogeny, 480
A. m. caucasica,
  A. m. carnica, 480
  bee breeding, 480
  genetic diversity, 480
  phylogeny, 480
A. obliqua,
  Anastrepha ludens, 2268
  fruit fly management, 2268
  host marking pheromones, 2268
  Tephritidae, 2268
abamectin,
  maize, 1352
  stored-product pests, 1352
  temperature, 1352
  wheat, 1352
Abgrallaspis aguacatae,
  crawlers, 855
  Diaspididae, 855
  invasive pests, 855
  risk assessment, 855
above ground,
  below ground, 602
  European corn borer, 602
  herbivory, 602
  root-knot nematode, 602
Acalymma vittatum
  butternut squash, 1101
  Cucurbita maxima, 1101
  integrated pest management, 1101
  perimeter trap crops, 1101
acaricidal activity, 196, 809
  green walnut husks, 196
  macrocyclic lactones, 809
  methyl palmitate, 196
  oral treatment, 809
acaricide,
  DNA melting temperature, 373
  esterase, 373
  polymerase chain reaction, 373
  sodium channel, 373
acephate,
  insecticide resistance, 699
  Lygus lineolaris, 699
  tarnished plant bug, 699
acetamiprid,
  chlorfenapyr, 646
  spinosad, 646
  thiamethoxam, 646
Achaea janata,
  Cajanus cajan, 2343
  midgut trypsin-like proteinases, 2343
  proteinase inhibitor, 2343
  Spodoptera litura, 2343
acoustic detection,
  Antitrogus consanguineus, 1523
  Antitrogus parvulus, 1523
  Dermolepida albohirtum, 1523
  Lepidiota, 1523
Acrosternum hilare, 1344, 1915
  azadirachtin, 1915
  Euschistus servus, 1344, 1915
  Nezara viridula, 1344
  pyrethrins, 1915
  sample size, 1344
  spinosad, 1915
  tally threshold, 1344
action mechanism simulation,
  generalized linear mixed model, 1977
  insect repellent, 1977
  maize weevil, 1977
Adalia bipunctata,
  Chrysoperla carnea, 1440
  entomopathogenic nematodes, 1440
  laboratory bioassay, 1440
  predators, 1440
Adelges tsugae,
  hemlock woolly adelgid, 1247
  host plant resistance, 1247
  hybrid hemlock, 1247
adult damage,
  Brachiaria, 1309
  host plant resistance, 1309
  spittlebugs, 1309
adult orientation,
  Coccinia grandis, 127
  Melittia oedipus, 127
  olfactory cues, 127
  visual cues, 127
Aethina tumida,
  entrance reducer, 13
  resistance, 13
  small hive beetle, 13
age-related resistance,
  Capsicum annuum, 30
  tobacco thrips, 30
aggregation,
  attractant, 2224
  fermentation, 2224
  fruit volatiles, 2224
  mass trapping, 2224
aggregation pheromone,
  arrestment, 992
  Diaprepes root weevil, 992
  wind tunnel, 992
alfalfa,
  alfalfa leafcutting bee, 1407
  lipid, 1407
  Medicago sativa, 1407
alfalfa leafcutting bee, 177, 1407
  alfalfa, 1407
  bumble bee, 177
  direct contact toxicity, 177
  insecticides, 177
  lipid, 1407
  Medicago sativa, 1407
  O. lignaria, 177
alkaline phosphatase,
  Chilo suppressalis, 1189
  diazinon resistance, 1189
  general esterases, 1189
  glutathione transferase, 1189
allele frequency,
  Bt resistance, 733
  Cry2Ab, 733
  F_2 screen, 733
  Helicoverpa punctigera, 733
Allium porum,
  intercropping, 999
  olfactometry, 999
  Ophiomyia phaseoli, 999
  plant protection, 999
Allotropa sp. near *mecrida*,
  Anagyrus kamali, 1431
  Hibiscus rosa-sinensis, 1431
  Maconellicoccus hirsutus, 1431
  Mariana Islands, 1431
almond,
  Captan, 20
  fungicide, 20
  honey bee, 20
  toxicity, 20
Amblyomma americanum, 804, 2316
  carvacrol, 2316
  delivery system, 804
  endectocide, 804
  Hematobia irritans, 804
  Ixodes scapularis, 2316
  nootkatone, 2316
  tick control, 2316
Anagyrus kamali,
  Allotropa sp. near *mecrida*, 1431
  Hibiscus rosa-sinensis, 1431
  Maconellicoccus hirsutus, 1431
  Mariana Islands, 1431
Anastrepha, 86, 2371
  Bactrocera, 2371
  baits, 86
  behavior, 86
  borax, 2371
  fruit fly attractants, 2371
  NuLure, 2371
  Tephritidae, 86
  trap design, 86
Anastrepha ludens, 585, 2268
  A. obliqua, 2268
  attractants, 585
  bitter orange, 585
  fruit fly management, 2268
  fruit volatiles, 585

host marking pheromones, 2268
kairomones, 585
Tephritidae, 2268
Anastrepha obliqua,
demographic changes, 542
laboratory colonization, 542
mass rearing, 542
sterile insect technique, 542
Anomala orientalis,
Exomala, 659
pheromone dispensers, 659
Vaccinium corymbosum, 659
(Z)-7-tetradecen-2-one, 659
Anoplolepis gracilipes,
baiting, 1586
boric acid, 1586
fipronil, 1586
indoxacarb, 1586
antagonist-based mating disruption,
apple, 1085
dogwood borer, 1085
mass trapping, 1085
Sesiidae, 1085
Anthonomus grandis, 183, 759
boll weevil, 183, 759
dichlorovos, 183
eradication, 759
kill strip, 183
microsatellites, 759
molecular diagnostic, 759
pheromone traps, 183
anthranilic diamide,
neonicotinoids, 927
ornamental plants, 927
Otiorhynchus sulcatus, 927
antiaggregation pheromone,
Dendroctonus brevicomis, 1846
pest management, 1846
Pinus ponderosa, 1846
stand protection, 1846
antibiosis, 1255, 1291, 1654, 1801, 2350
antixenosis, 1801
Delphacodes kuscheli, 1801
Diabrotica virgifera virgifera, 2350
Diuraphis noxia, 1255, 1654
electronic penetration graph, 1291
inheritance, 1654
insect resistance categories, 1255
maize, 2350
plant resistance, 1291, 2350
proportional plant dry weight change, 1255
resistance, 1654
tolerance, 1801
tolerance index, 1255, 1291
wheat, 1654, 1801
Anticarsia gemmatalis,
Bacillus thuringiensis, 1640
Pseudoplusia includens, 1640
resistance management, 1640
transgenic soybean, 1640
Antitrogus consanguineus,
acoustic detection, 1523
Antitrogus parvulus, 1523
Dermolepida albohirtum, 1523
Lepidiota, 1523
Antitrogus parvulus,
acoustic detection, 1523
Antitrogus consanguineus, 1523
Dermolepida albohirtum, 1523
Lepidiota, 1523
antixenosis,
antibiosis, 1801
Delphacodes kuscheli, 1801
tolerance, 1801
wheat, 1801
apartments,
Blattella germanica, 1614
cockroach allergen, 1614
control, 1614
aphid,
Populus, 1070
proteinase inhibitor, 1070
reverse transcription-polymerase chain reaction, 1070
aphid parasitoids,
crop habitats, 836
noncrop habitats, 836
southeastern Europe, 836
tritrophic interactions, 836
Aphidius colemani,
baited insecticides, 144
Cryptolaemus montrouzieri, 144
Neoseiulus californicus, 144
Aphis glycines, 133, 1389
cross-species amplification, 1389
development, 133
fecundity, 133
flight, 133
maternal effects, 133
microsatellites, 1389
soybean aphid, 1389
apiculture farm operators,
apiculture farm size and location, 868
bee colonies, 868
beekeepers, 868
apiculture farm size and location,
apiculture farm operators, 868
bee colonies, 868
beekeepers, 868
Apis,
breeding program, 1233
genetic differentiation, 1233
Russian honey bees, 1233
Apis mellifera, 485, 1472
GF-120, 1472
honey bee, 1472
hygienic behavior, 485
Nosema spp., 485
Spinosad, 1472
Tephritidae, 1472
Varroa destructor, 485
apple,
antagonist-based mating disruption, 1085
dogwood borer, 1085
mass trapping, 1085
Sesiidae, 1085
apple exportation,
microbial control, 43
postharvest, 43
quarantine treatments, 43
Arachnida,
black widow spider, 1396
Latrodectus, 1396
pest control, 1396
urban entomology, 1396
arborvitae,
bagworm, 1164
Thyridopteryx ephemeraeformis, 1164
translaminar, 1164
urban entomology, 1164
area under the receiver operating characteristic curve,
Ceratitis capitata, 1985
clustered data, 1985
oviposition distribution, 1985
receiver operating characteristic curve, 1985
armored scale insects,
avocado, 1948
Diaspididae, 1948
internal transcriber spacer 2, 1948
species-specific multiplex-polymerase chain reaction, 1948
arrestment,
aggregation pheromone, 992
Diaprepes root weevil, 992
wind tunnel, 992
arthropod diversity,
insect–plant interactions, 1116
predatory Heteroptera, 1116
turfgrass, 1116
artificial diet,
egg collection, 257
oviposition, 257
pepper weevil, 257
Ataxia hubbardi,
Cylindrocopturus adspersus, 1044
lodging, 1044
plant population, 1044
soil moisture, 1044
attract and kill,
attracticides, 815
lure and kill, 815
pheromones, 815
semiochemicals, 815
attractant, 585, 1009, 1175, 2072, 2224
aggregation, 2224
Anastrepha ludens, 585
bitter orange, 585
fermentation, 2224
foraging behavior, 1175
fruit volatiles, 585, 2224
host preference, 1009
kairomones, 585

mass trapping, 2224
monitoring, 2072
semiochemicals, 1009
Spondias mombin, 2072
termite control, 1175
trap crops, 1009
tunneling, 1175
volatiles, 2072
West Indian fruit fly, 2072
(Z)-3-hexenyl acetate, 1009
attracticides,
attract and kill, 815
lure and kill, 815
pheromones, 815
semiochemicals, 815
attraction,
kinesis, 2056
locomotor initiator, 2056
repellency, 2056
taxis, 2056
automatic detection,
automatic recognition, 1681
bioacoustics, 1681
Rhynchophorus ferrugineus, 1681
Sitophilus oryzae, 1681
automatic recognition,
automatic detection, 1681
bioacoustics, 1681
Rhynchophorus ferrugineus, 1681
Sitophilus oryzae, 1681
avocado,
armored scale insects, 1948
Diaspididae, 1948
internal transcriber spacer 2, 1948
species-specific multiplex-polymerase chain reaction, 1948
azadirachtin,
Acrosternum hilare, 1915
Euschistus servus, 1915
pyrethrins, 1915
spinosad, 1915

B

B. cucurbitae,
Bactrocera dorsalis, 552
naled, 552
spinosad, 552
Tephritid flies, 552
B. thuringiensis subsp. *israelensis*,
Bacillus sphaericus, 1423
chicken feathers, 1423
deoiled rice bran, 1423
toxicity, 1423
Bacillus sphaericus,
B. thuringiensis subsp. *israelensis*, 1423
chicken feathers, 1423
deoiled rice bran, 1423
toxicity, 1423
Bacillus thuringiensis, 624, 708, 1497, 1640, 1935, 2217, 2301
Anticarsia gemmatalis, 1640
Bollgard II, 708
bollworm, 2301
Bt resistance, 708
cotton, 2301
Cry toxins, 2217
Cry1Ac, 1497
Cry1F, 1497
Cry2Ab, 708
diamondback moth, 2217
European corn borer, 624
evaluation technique, 624
H. zea, 1935
Helicoverpa armigera, 708
IC_{50}, 1935
LC_{50}, 1935
MIC_{50}, 1935
model, 624
Plutella xylostella, 2217
Pseudoplusia includens, 1497, 1640
resistance, 2301
resistance management, 1640
Spodoptera exigua, 1497
Spodoptera frugiperda, 1497
transgenic crops, 2301
transgenic soybean, 1640
whorl-stage corn, 624
Bacillus thuringiensis serovar *japonensis*,
Northern masked chafer, 1891
oriental beetle, 1891
Scarabaeidae, 1891
Bacillus thuringiensis variety *israelensis*,
catch-trays, 507
distribution pattern, 507
helicopter, 507
s-methoprene, 507
bacteria,
glassy-winged sharpshooter, 1743
insect vector, 1743
leafhoppers, 1743
Pierce's disease, 1743
bacterial opportunist,
cotton bolls, 36
seed rot, 36
stink bugs, 36
vector, 36
Bactrocera, 139, 2371
Anastrepha, 2371
borax, 2371
Ceratitis, 139
Force, 139
fruit fly attractants, 2371
NuLure, 2371
soil insecticides, 139
Warrior, 139
Bactrocera dorsalis,
B. cucurbitae, 552
naled, 552
spinosad, 552
Tephritid flies, 552
Bactrocera invadens, 515, 981
Benin, 515
Ceratitis cosyra, 515, 981
competitive displacement, 981
GF-120, 515
invasive species, 981
Mangifera indica, 515
native species, 981
bagworm,
arborvitae, 1164
Thyridopteryx ephemeraeformis, 1164
translaminar, 1164
urban entomology, 1164
baited insecticides,
Aphidius colemani, 144
Cryptolaemus montrouzieri, 144
Neoseiulus californicus, 144
baiting,
Anoplolepis gracilipes, 1586
boric acid, 1586
fipronil, 1586
indoxacarb, 1586
baits,
Anastrepha, 86
behavior, 86
Tephritidae, 86
trap design, 86
Bambusa,
Chlorophorus, 913
fumigation, 913
methyl bromide, 913
quarantine, 913
barcodes,
internal transcribed spacer, 2333
nested polymerase chain reaction, 2333
Tortricidae, 2333
bark beetles,
fumigation, 79
push-pull strategy, 79
quarantine pest, 79
wood borers, 79
barley,
Hessian fly, 1663
host plant resistance, 1663
rice, 1663
wheat, 1663
barrier,
contact toxicity, 2279
horizontal toxicity, 2279
insecticide, 2279
Linepithema humile, 2279
Bartlett's sequential hypothesis test,
Bartlett's sequential hypothesis test, 1970
Iwao's method, 1970
three-hypothesis testing, 1970
Wald's sequential hypothesis test, 1970
beat cloth,
sampling efficiency, 2360
sweep net, 2360
Taylor's power law, 2360
Beauveria bassiana,
formulation, 1759
Soyscreen, 1759
UV screen, 1759
bed bug,
Cimex lectularius, 1182
control, 1182

heat treatment, 1182
lethal temperature, 1182
bee breeding,
A. m. carnica, 480
A. m. caucasica, 480
genetic diversity, 480
phylogeny, 480
bee colonies,
apiculture farm operators, 868
apiculture farm size and location, 868
beekeepers, 868
beekeepers,
apiculture farm operators, 868
apiculture farm size and location, 868
bee colonies, 868
behavior, 86, 105
Anastrepha, 86
baits, 86
butterfly, 105
cost-effective, 105
longevity, 105
mark–recapture, 105
Tephritidae, 86
trap design, 86
behavioral resistance,
dispersal, 781
feeding, 781
insect resistance management, 781
transgenic, 781
below ground,
above ground, 602
European corn borer, 602
herbivory, 602
root-knot nematode, 602
Bemisia argentifolii,
microsatellite markers, 670
mitochondrial cytochrome oxidase I subunit, 670
silverleaf whitefly, 670
Bemisia tabaci, 750, 1482
cytochrome oxidase I, 750
mitochondria, 750
silverleaf whitefly, 1482
tomato yellow leaf curl virus, 1482
TYLCV, 1482
whitefly, 750
Benin,
Bactrocera invadens, 515
Ceratitis cosyra, 515
GF-120, 515
Mangifera indica, 515
Benin Republic,
cotton, 1928
Helicoverpa armigera, 1928
pyrethroids resistance, 1928
resistance stability, 1928
bifenazate,
control cost, 336
cost analysis, 336
Phtyoseiulus persimilis, 336
Tetranychus urticae, 336
billbugs,
developmental time, 309
seasonal phenology, 309
Sphenophorus venatus vestitus, 309
turfgrass, 309
binomial sequential sampling,
Listronotus maculicollis, 1325
resampling validation, 1325
turfgrass, 1325
bioacoustics,
automatic detection, 1681
automatic recognition, 1681
Rhynchophorus ferrugineus, 1681
Sitophilus oryzae, 1681
bioassay, 558, 1864, 2084, 2255
cucurbit, 2255
Diabrotica virgifera virgifera, 558
host search behavior, 558
imidacloprid, 2255
insect growth regulator, 1864
laboratory method, 2084
lethal concentration, 2084
neonicotinoid, 1864
organophosphate, 1864
residue profile, 1864
striped cucumber beetle, 2255
Tetranychus urticae, 2084
Zea mays, 558
bioavailability,
Reticulitermes flavipes, 1922
termites, 1922
termiticide, 1922
toxicity, 1922
biocontrol, 287, 2325
citrus greening, 2325
DNA barcode, 2325
IPM, 287
Ostrinia nubilalis, 287
pathway analysis, 2325
pepper, 287
Trichogramma ostriniae, 287
bioenergy,
biomass, 2154
Energy Independence and Security Act, 2154
ethanol, 2154
pest, 2154
biofumigant,
emergence delay, 2041
Rhagoletis indifferens, 2041
sublethal effects, 2041
volatile organic compounds, 2041
biological control, 58, 247, 905, 1018, 1224, 1816, 1896, 2183
Bt transgenic cotton, 1018
citrus greening, 247
Citrus sinensis, 247
conservation, 905, 1816
corncob, 58
Diaphorina citri, 247
Diaprepes root weevil, 905
egg parasitoid, 905
fitness cost, 1224
floriculture, 1896
gelatin, 58
Glycine max, 1816
granular matrix, 58
HD-125 strain, 58
Huanglongbing, 247
immune response, 1224
insecticide regulation, 1816
integrated pest management, 1896
integrated resistance management, 1224
life tables, 1018
Myzus persicae, 2183
nontarget impacts, 1816
pepper, 2183
percentage of parasitism, 1018
pesticide residues, 905
plant growth-promoting rhizobacteria, 2183
Rosa hybrida, 1896
simulation modeling, 1224
temporal abundance, 1018
Tetranychus urticae, 1896
biology,
developmental period, 1039
Scrophularia ningpoensis, 1039
survival rate, 1039
temperature, 1039
biomass,
bioenergy, 2154
Energy Independence and Security Act, 2154
ethanol, 2154
pest, 2154
biopesticides,
essential oils, 304
reduced-risk insecticides, 304
biotype, 774, 1624, 1954
Diuraphis noxia, 1954
greenbug, 1624
Hessian fly, 774
Mayetiola destructor, 774
plant resistance, 774, 1624, 1954
Russian wheat aphid, 1954
Schizaphis graminum, 1624
sorghum, 1624
wheat breeding, 774
bitter orange,
Anastrepha ludens, 585
attractants, 585
fruit volatiles, 585
kairomones, 585
black widow spider,
Arachnida, 1396
Latrodectus, 1396
pest control, 1396
urban entomology, 1396
blacklight trap,
critical fruit damage stage, 1133
invasive species, 1133
stink bug, 1133
Blattella germanica,
apartments, 1614
cockroach allergen, 1614
control, 1614
boll weevil, 183, 759
Anthonomus grandis, 183, 759
dichlorovos, 183
eradication, 759

kill strip, 183
microsatellites, 759
molecular diagnostic, 759
pheromone traps, 183
Bollgard II,
Bacillus thuringiensis, 708
Bt resistance, 708
Cry2Ab, 708
Helicoverpa armigera, 708
bollworm,
Bacillus thuringiensis, 2301
cotton, 2301
resistance, 2301
transgenic crops, 2301
Bombyx mori,
glutathione *S*-transferase, 1591
expression profile, 1591
insect virsues, 1591
pesticides, 1591
booklice,
cardboard refuges, 1714
grain storages, 1714
numerical sampling, 1714
presence-absence sampling, 1714
borax,
Anastrepha, 2371
Bactrocera, 2371
fruit fly attractants, 2371
NuLure, 2371
boric acid,
Anoplolepis gracilipes, 1586
baiting, 1586
fipronil, 1586
indoxacarb, 1586
botanical insecticides,
eucalyptol, 1383
fumigant activity, 1383
house fly, 1383
Musca domestica, 1383
Brachiaria,
spittlebugs, 1309
adult damage, 1309
host plant resistance, 1309
Brassicaceae,
Contarinia nasturtii, 115
swede midge, 115
weed, 115
break-even analysis,
gain threshold, 2101
IPM, 2101
breeding program,
Apis, 1233
genetic differentiation, 1233
Russian honey bees, 1233
Bt crops,
high-dose/refuge strategy, 717
mathematical modeling, 717
resistance management, 717
RIDL, 717
Bt resistance, 708, 733
allele frequency, 733
Bacillus thuringiensis, 708
Bollgard II, 708
Cry2Ab, 708, 733
F_2 screen, 733
Helicoverpa armigera, 708
Helicoverpa punctigera, 733
Bt transgenic cotton,
biological control, 1018
life tables, 1018
percentage of parasitism, 1018
temporal abundance, 1018
Bt-resistance allele frequency,
F_2 screen, 381
Heliothis virescens, 381
insecticide resistance management, 381
single-pair families, 381
bumble bee,
alfalfa leafcutting bee, 177
direct contact toxicity, 177
insecticides, 177
O. lignaria, 177
butterfly,
behavior, 105
cost-effective, 105
longevity, 105
mark–recapture, 105
butternut squash,
Acalymma vittatum, 1101
Cucurbita maxima, 1101
integrated pest management, 1101
perimeter trap crops, 1101

C

^{13}C,
mass rearing, 941
Mediterranean fruit flies, 941
stable isotopes, 941
sterile insect technique, 941
cabbage crowngall fly,
cabbage gall midge, 2241
Contarinia nasturtii, 2241
neonicotinoids, 2241
pyrethroids, 2241
cabbage gall midge,
cabbage crowngall fly, 2241
Contarinia nasturtii, 2241
neonicotinoids, 2241
pyrethroids, 2241
Cacalia tangutica,
cytotoxicity, 1444
friedelin, 1444
insecticidal activity, 1444
stigmasterol, 1444
Cajanus cajan,
Achaea janata, 2343
midgut trypsin-like proteinases, 2343
proteinase inhibitor, 2343
Spodoptera litura, 2343
canola,
Delia spp., 219
intercropping, 219
oilseed rape, 219
root maggots, 219
Capsicum annuum,
age-related resistance, 30
tobacco thrips, 30
Captan,
almond, 20
fungicide, 20
honey bee, 20
toxicity, 20
Captiva,
host plant resistance, 432
leaf sheath anatomy, 432
lignification, 432
southern chinch bug, 432
carboxyl-esterases,
cytochrome P450, 1203
glutathione *S*-transferase, 1203
synergists, 1203
cardboard refuges, 1377, 1714
booklice, 1714
grain storages, 1714
Insector probe traps, 1377
numerical sampling, 1714
population dynamics, 1377
presence-absence sampling, 1714
stored products, 1377
carrot purple leaf disease,
citrus stubborn disease, 1417
leafhopper vectors, 1417
propagative transmission, 1417
carvacrol,
Amblyomma americanum, 2316
Ixodes scapularis, 2316
nootkatone, 2316
tick control, 2316
cat flea,
Ctenocephalides felis, 366
fipronil, 366
insecticide resistance, 366
Rdl, 366
catalase,
esterase, 1262
lipoxygenase, 1262
lipoxygenase 1, 1262
peroxidase, 1262
catch-trays,
Bacillus thuringiensis variety *israelensis*, 507
distribution pattern, 507
helicopter, 507
s-methoprene, 507
Catharanthus roseus,
Helicoverpa armigera, 1197
oleic and linoleic acids, 1197
Centris analis,
crop pollination, 265
larval diet, 265
Malpighia emarginata, 265
Cephus cinctus,
cultivar blend, 2137
trap crop, 2137
wheat, 2137
wheat stem sawfly, 2137
Cerambycidae,
Curculionidae, 1075
heat treatment, 1075
Scolytidae, 1075
Scolytinae, 1075
Ceratitis, 139, 401
Bactrocera, 139
DNA barcode, 401
Force, 139
invasive, 401
pathway analysis, 401
polymerase chain reaction-restriction fragment-

length polymorphism, 401
soil insecticides, 139
Warrior, 139
Ceratitis capitata, 1239, 1781, 1985
area under the receiver operating characteristic curve, 1985
Ceratitis cosyra, 1781
Ceratitis rosa, 1781
clustered data, 1985
GARP, 1781
LAMP, 1239
Maxent, 1781
molecular identification, 1239
oviposition distribution, 1985
quarantine, 1239
receiver operating characteristic curve, 1985
Ceratitis cosyra, 515, 981, 1781
Bactrocera invadens, 515, 981
Benin, 515
Ceratitis capitata, 1781
Ceratitis rosa, 1781
competitive displacement, 981
GARP, 1781
GF-120, 515
invasive species, 981
Mangifera indica, 515
Maxent, 1781
native species, 981
Ceratitis rosa,
Ceratitis capitata, 1781
Ceratitis cosyra, 1781
GARP, 1781
Maxent, 1781
Ceratothripoides claratris,
greenhouses, 1559
immigration, 1559
insect vision, 1559
UV, 1559
Chaetodactylus krombeini,
essential oil, 2090
formic acid, 2090
Osmia cornifrons, 2090
wintergreen oil, 2090
chemical control,
IPM, 1032
potato, 1032
zebra chip disease, 1032
chicken feathers,
B. thuringiensis subsp. *israelensis*, 1423
Bacillus sphaericus, 1423
deoiled rice bran, 1423
toxicity, 1423
Chilo suppressalis, 1094, 1189
alkaline phosphatase, 1189
diazinon resistance, 1189
general esterases, 1189
glutathione transferase, 1189
mass trapping, 1094
mesoporous dispenser, 1094
pest monitoring, 1094
pheromone, 1094
chlorfenapyr,
acetamiprid, 646
spinosad, 646
thiamethoxam, 646
Chlorophorus,
Bambusa, 913
fumigation, 913
methyl bromide, 913
quarantine, 913
chlorophyll content,
cluster analysis, 1960
photosynthesis, 1960
principal component analysis, 1960
stunt and necrosis ratings, 1960
choice,
Habrobracon hebetor, 610
host instar, 610
parasitoid, 610
Plodia interpunctella, 610
Christmas trees,
permethrin, 69
pyrethroid insecticides, 69
tree shaking, 69
yellowjackets, 69
Chrysoperla carnea,
Adalia bipunctata, 1440
entomopathogenic nematodes, 1440
laboratory bioassay, 1440
predators, 1440
Cimex lectularius, 1182, 1580, 2310
bed bug, 1182
control, 1182
heat treatment, 1182
insecticide synergism, 2310
lethal temperature, 1182
lure, 1580
P450, 2310
piperonyl butoxide, 2310
pyrethroid resistance, 2310
monitoring, 1580
trap, 1580
citrus, 296, 685, 960
citrus greening disease, 685
coverage, 296
Diaphorina citri, 685
glassy-winged sharpshooter, 960
huanglongbing, 685
insect–plant interactions, 960
integrated pest management, 296
plant stress, 960
soft scale, 296
spray effectiveness, 296
temperature-dependent toxicity, 685
citrus greening, 247, 2325
biocontrol, 2325
biological control, 247
Citrus sinensis, 247
Diaphorina citri, 247
DNA barcode, 2325
Huanglongbing, 247
pathway analysis, 2325
citrus greening disease, 446, 685
citrus, 685
Diaphorina citri, 685
huanglongbing, 446, 685
psyllid, 446
temperature-dependent toxicity, 685
Citrus sinensis,
biological control, 247
citrus greening, 247
Diaphorina citri, 247
Huanglongbing, 247
citrus stubborn disease,
carrot purple leaf disease, 1417
leafhopper vectors, 1417
propagative transmission, 1417
clone,
Columbia Basin, 1649
IPM, 1649
Phthorimaea operculella, 1649
potato, 1649
cluster analysis,
chlorophyll content, 1960
photosynthesis, 1960
principal component analysis, 1960
stunt and necrosis ratings, 1960
clustered data,
area under the receiver operating characteristic curve, 1985
Ceratitis capitata, 1985
oviposition distribution, 1985
receiver operating characteristic curve, 1985
Coccinia grandis,
adult orientation, 127
Melittia oedipus, 127
olfactory cues, 127
visual cues, 127
Cochliomyia hominivorax,
eradication, 799
mass rearing, 799
New World screwworm, 799
cockroach allergen,
apartments, 1614
Blattella germanica, 1614
control, 1614
cocoa,
coffee, 1767
nucleopolyhedrovirus, 1767
Spodoptera exigua, 1767
UV radiation, 1767
codling moth,
Indianmeal moth, 2003
navel orangeworm, 2003
tree nuts, 2003
vacuum treatment, 2003
coffee,
cocoa, 1767
nucleopolyhedrovirus, 1767
Spodoptera exigua, 1767
UV radiation, 1767

colocalization,
dissemination, 453
imaging, 453
Indianmeal moth, 453
powder, 453
colonization,
dairy farms, 788
dispersal, 788
Muscidae, 788
stable fly, 788
colony collapse disorder,
coumaphos, 474
cytochrome P450 monooxygenase, 474
tau-fluvalinate, 474
Varroa destructor, 474
color,
host odor, 954
shape, 954
size, 954
tephritids, 954
Colorado potato beetle,
host resistance, 422
potato, 422
Solanum, 422
wild species, 422
Columbia Basin,
clone, 1649
IPM, 1649
Phthorimaea operculella, 1649
potato, 1649
commodity treatment,
disinfestations, 64
irradiation, 64
Ostrinia nubilalis, 64
quarantine, 64
communication,
Coptotermes, 121
social insect, 121
vibration, 121
compatibility,
Dalotia, 1750
fungicides, 1750
insecticides, 1750
survival, 1750
competitive displacement,
Bactrocera invadens, 981
Ceratitis cosyra, 981
invasive species, 981
native species, 981
conservation, 905, 1816
biological control, 905, 1816
Diaprepes root weevil, 905
egg parasitoid, 905
Glycine max, 1816
insecticide regulation, 1816
nontarget impacts, 1816
pesticide residues, 905
conservation biological control,
Humulus lupulus, 274
Phorodon humuli, 274
Podosphaera macularis, 274
predaceous mites, 274
contact toxicity,
barrier, 2279
horizontal toxicity, 2279
insecticide, 2279
Linepithema humile, 2279
Contarinia nasturtii, 115, 2241
Brassicaceae, 115
cabbage crowngall fly, 2241
cabbage gall midge, 2241
neonicotinoids, 2241
pyrethroids, 2241
swede midge, 115
weed, 115
control, 1182, 1614
apartments, 1614
bed bug, 1182
Blattella germanica, 1614
Cimex lectularius, 1182
cockroach allergen, 1614
heat treatment, 1182
lethal temperature, 1182
control cost,
bifenazate, 336
cost analysis, 336
Phtyoseiulus persimilis, 336
Tetranychus urticae, 336
Coptotermes,
communication, 121
social insect, 121
vibration, 121
corn, 210, 2146
cotton, 210
economic injury level, 2146
European corn borer, 2146
migration, 210
Ostrinia nubilalis, 2146
silage, 2146
Spodoptera Frugiperda, 210
corn earworm,
insecticide resistance, 2289
pyrethroid, 2289
corncob,
biological control, 58
gelatin, 58
granular matrix, 58
HD-125 strain, 58
cost analysis,
bifenazate, 336
control cost, 336
Phtyoseiulus persimilis, 336
Tetranychus urticae, 336
cost-effective,
behavior, 105
butterfly, 105
longevity, 105
mark–recapture, 105
cotton, 210, 887, 1928, 2301
Bacillus thuringiensis, 2301
Benin Republic, 1928
bollworm, 2301
corn, 210
Frankliniella tritici, 887
Fusarium hardlock, 887
Helicoverpa armigera, 1928
lambda-cyhalothrin, 887
migration, 210
pyrethroids resistance, 1928
resistance, 2301
resistance stability, 1928
Spodoptera Frugiperda, 210
thiophanate-methyl, 887
transgenic crops, 2301
cotton bolls,
bacterial opportunist, 36
seed rot, 36
stink bugs, 36
vector, 36
coumaphos,
colony collapse disorder, 474
cytochrome P450 monooxygenase, 474
tau-fluvalinate, 474
Varroa destructor, 474
coverage,
citrus, 296
integrated pest management, 296
soft scale, 296
spray effectiveness, 296
crane flies,
golf courses, 652
invasive insects, 652
Tipula oleracea, 652
Tipula paludosa, 652
crawlers,
Abgrallaspis aguacatae, 855
Diaspididae, 855
invasive pests, 855
risk assessment, 855
critical fruit damage stage,
blacklight trap, 1133
invasive species, 1133
stink bug, 1133
crop habitats,
aphid parasitoids, 836
noncrop habitats, 836
southeastern Europe, 836
tritrophic interactions, 836
crop monitoring,
error, 1336
imported cabbageworm, 1336
pest complex, 1336
precision, 1336
crop pollination,
Centris analis, 265
larval diet, 265
Malpighia emarginata, 265
cross-species amplification,
Aphis glycines, 1389
microsatellites, 1389
soybean aphid, 1389
cross-tolerance,
Cry1Ac, 1217
Cry2Ab, 1217
Helicoverpa armigera, 1217
Cry protein,
enzyme-linked immunosorbent assay, 1301
transgenic cotton, 1301
WideStrike, 1301
Cry toxins,
Bacillus thuringiensis, 2217
diamondback moth, 2217
Plutella xylostella, 2217
Cry1Ac, 1217, 1497
Bacillus thuringiensis, 1497
cross-tolerance, 1217
Cry1F, 1497
Cry2Ab, 1217

Helicoverpa armigera, 1217
Pseudoplusia includens, 1497
Spodoptera exigua, 1497
Spodoptera frugiperda, 1497
Cry1Ac-susceptibility,
insect artificial diet comparison, 1599
larval growth, 1599
tobacco budworm, 1599
Cry1F,
Bacillus thuringiensis, 1497
Cry1Ac, 1497
Pseudoplusia includens, 1497
Spodoptera exigua, 1497
Spodoptera frugiperda, 1497
Cry2Ab, 708, 733, 1217
allele frequency, 733
Bacillus thuringiensis, 708
Bollgard II, 708
Bt resistance, 733
Bt resistance, 708
cross-tolerance, 1217
Cry1Ac, 1217
F_2 screen, 733
Helicoverpa armigera, 708, 1217
Helicoverpa punctigera, 733
Cry3Bb1,
Diabrotica virgifera virgifera, 1607
phenology, 1607
resistance management, 1607
Cryptolaemus montrouzieri,
Aphidius colemani, 144
baited insecticides, 144
Neoseiulus californicus, 144
Cryptolestes ferrugineus,
Rhyzopertha dominica, 1696
sampling, 1696
stored grain, 1696
Tribolium castaneum, 1696
Cryptomeria japonica,
Epinotia granitalis, 629, 629
survival, 629
Ctenocephalides felis,
cat flea, 366
fipronil, 366
insecticide resistance, 366
Rdl, 366
cucumber,
hardening, 2265
plant attractiveness, 2265
transplant, 2265
whitefly, 2265
cucurbit,
bioassay, 2255
imidacloprid, 2255
striped cucumber beetle, 2255
Cucurbita,
irrigation, 563
Peponapis, 563
sustainable agriculture, 563
tillage, 563
Cucurbita maxima,
Acalymma vittatum, 1101
butternut squash, 1101
integrated pest management, 1101
perimeter trap crops, 1101
cultivar blend,
Cephus cinctus, 2137
trap crop, 2137
wheat, 2137
wheat stem sawfly, 2137
cultural control, 948, 2192
fruit thinning, 948
host plant resistance, 2192
integrated pest management, 948
IPM, 2192
Lepidoptera, 948
Popillia japonica, 2192
soil ecology, 2192
curative activity,
neonicotinoid, 1884
organophosphate, 1884
residue profile, 1884
Rhagoletis pomonella, 1884
Curculionidae,
Cerambycidae, 1075
heat treatment, 1075
Scolytidae, 1075
Scolytinae, 1075
Cydia pomonella, 315, 2209
diagnostics, 2209
Grapholita molesta, 315
Grapholita spp., 2209
Isomate, 315
mating disruption, 315
polymerase chain reaction-restriction fragment-length polymorphism, 2209
sex attractant pheromone, 315
species identification, 2209
Cylindrocopturus adspersus, 1044, 1281
Ataxia hubbardi, 1044
Dectes texanus, 1281
host plant resistance, 1281
lodging, 1044
Pelochrista womonana, 1281
plant population, 1044
soil moisture, 1044
sunflower, 1281
cytochrome oxidase I, 398, 750
Bemisia tabaci, 750
foxglove aphid, 398
glasshouse potato aphid, 398
mitochondria, 750
whitefly, 750
cytochrome P450,
carboxyl-esterases, 1203
glutathione S-transferase, 1203
synergists, 1203
cytochrome P450 monooxygenase,
colony collapse disorder, 474
coumaphos, 474
tau-fluvalinate, 474
Varroa destructor, 474
cytotoxicity,
Cacalia tangutica, 1444
friedelin, 1444
insecticidal activity, 1444
stigmasterol, 1444

D

dairy farms,
colonization, 788
dispersal, 788
Muscidae, 788
stable fly, 788
Dalotia,
compatibility, 1750
fungicides, 1750
insecticides, 1750
survival, 1750
decision probability matrix,
parameter selection, 1874
resampling software, 1874
Trichoplusia ni, 1874
Dectes texanus,
Cylindrocopturus adspersus, 1281
host plant resistance, 1281
Pelochrista womonana, 1281
sunflower, 1281
degree-day,
hornfaced bee, 2026
pollination, 2026
Delia spp.,
canola, 219
intercropping, 219
oilseed rape, 219
root maggots, 219
delivery system,
Amblyomma americanum, 804
endectocide, 804
Hematobia irritans, 804
Delphacodes kuscheli,
antibiosis, 1801
antixenosis, 1801
tolerance, 1801
wheat, 1801
demographic changes,
Anastrepha obliqua, 542
laboratory colonization, 542
mass rearing, 542
sterile insect technique, 542
demography,
multigeneration, 357
Plutella xylostella, 357
spinosad, 357
sublethal effect, 357
Dendroctonus brevicomis, 1846, 2170
antiaggregation pheromone, 1846
pest management, 1846
Pinus ponderosa, 1846, 2170
risk, 2170
stand density, 2170
stand protection, 1846
trapping, 2170
Dendroctonus frontalis,
emamectin benzoate, 1062
fipronil, 1062
Ips spp., 1062
single-tree protection, 1062
density–yield relationship,
economic injury level, 1536
Lissorhoptrus oryzophilus, 1536
Oryza sativa, 1536
planting date, 1536

deoiled rice bran,
B. thuringiensis subsp. *israelensis*, 1423
Bacillus sphaericus, 1423
chicken feathers, 1423
toxicity, 1423
Dermolepida albohirtum,
acoustic detection, 1523
Antitrogus consanguineus, 1523
Antitrogus parvulus, 1523
Lepidiota, 1523
detection, 1460, 1691
invasive species, 1460
real-time PCR, 1691
Stenoma catenifer, 1460
stored-product pests, 1691
Tribolium confusum, 1691
(6Z,9Z)-tricosadiene, 1460
(9Z)-9,13-tetradecadien-11-ynal, 1460
development, 133, 1490, 1705
Aphis glycines, 133
fecundity, 133, 1490
fertility, 1490
flight, 133
insect growth regulators, 1490
life table, 1705
Liposcelis paeta, 1705
maternal effects, 133
Spodoptera littoralis, 1490
stored product, 1705
temperature, 1705
development rates,
grain, 1360
life history, 1360
stored products, 1360
developmental biology,
host preference, 1908
Leptoglossus zonatus, 1908
Satsuma mandarin, 1908
developmental period,
biology, 1039
Scrophularia ningpoensis, 1039
survival rate, 1039
temperature, 1039
developmental rate,
growing degree-days, 637
tussock moth, 637
developmental time,
billbugs, 309
seasonal phenology, 309
Sphenophorus venatus vestitus, 309
turfgrass, 309
Diabrotica virgifera virgifera, 558, 1317, 1607, 2350
antibiosis, 2350
bioassay, 558
Cry3Bb1, 1607
heterosis, 1317
host search behavior, 558
maize, 2350
native plant resistance, 1317
phenology, 1607
plant resistance, 2350
resistance management, 1607
western corn rootworm, 1317
Zea mays, 558
diagnostics, 8, 2209
Cydia pomonella, 2209
Grapholita spp., 2209
PCR, 8
Planococcus citri, 8
Planococcus minor, 8
polymerase chain reaction-restriction fragment-length polymorphism, 2209
restriction fragment length polymorphism, 8
species identification, 2209
diamondback moth,
Bacillus thuringiensis, 2217
Cry toxins, 2217
Plutella xylostella, 2217
Diaphorina citri, 247, 685
biological control, 247
citrus, 685
citrus greening, 247
citrus greening disease, 685
Citrus sinensis, 247
huanglongbing, 247, 685
temperature-dependent toxicity, 685
Diaprepes abbreviatus,
net CO_2 assimilation, 1141
internal CO_2 concentration, 1141
stomatal conductance, 1141
transpiration, 1141
Diaprepes root weevil, 905, 992
aggregation pheromone, 992
arrestment, 992
biological control, 905
conservation, 905
egg parasitoid, 905
pesticide residues, 905
wind tunnel, 992
Diaspididae, 855, 1948
Abgrallaspis aguacatae, 855
armored scale insects, 1948
avocado, 1948
crawlers, 855
internal transcriber spacer 2, 1948
invasive pests, 855
risk assessment, 855
species-specific multiplex-polymerase chain reaction, 1948
Diatraea saccharalis,
natural enemies, 1054
Solenopsis invicta, 1054
sugarcane integrated pest management, 1054
diazinon resistance,
alkaline phosphatase, 1189
Chilo suppressalis, 1189
general esterases, 1189
glutathione transferase, 1189
dichlorovos,
Anthonomus grandis, 183
boll weevil, 183
kill strip, 183
pheromone traps, 183
digestion,
Ephestia kuehniella, 500
nutrition, 500
predatory behavior, 500
thrips, 500
digging dynamics,
excavated volume, 1393
Solenopsis invicta, 1393
direct behavioral observations,
long-lasting insecticide treated nets, 2061
loss of host cues, 2061
malaria vector, 2061
direct contact toxicity,
alfalfa leafcutting bee, 177
bumble bee, 177
insecticides, 177
O. lignaria, 177
disinfestations,
commodity treatment, 64
irradiation, 64
Ostrinia nubilalis, 64
quarantine, 64
dispersal, 781, 788
behavioral resistance, 781
colonization, 788
dairy farms, 788
feeding, 781
insect resistance management, 781
Muscidae, 788
stable fly, 788
transgenic, 781
dissemination,
colocalization, 453
imaging, 453
Indianmeal moth, 453
powder, 453
distribution pattern,
Bacillus thuringiensis variety *israelensis*, 507
catch-trays, 507
helicopter, 507
s-methoprene, 507
Diuraphis noxia, 440, 533, 1255, 1654, 1954
antibiosis, 1255, 1654
biotype, 1954
Dn4 gene, 440
founder effect, 440
host plant resistance, 440
inheritance, 1654
insect resistance categories, 1255
invasive species, 440
plant resistance, 1954
precision agriculture, 533
proportional plant dry weight change, 1255
resistance, 1654
Russian wheat aphid, 1954
satellite imagery, 533
spatial modeling, 533
tolerance index, 1255
topography, 533
wheat, 1654

Dn4 gene,
Diuraphis noxia, 440
founder effect, 440
host plant resistance, 440
invasive species, 440
DNA barcode, 401, 2325
biocontrol, 2325
Ceratitis, 401
citrus greening, 2325
invasive, 401
pathway analysis, 401, 2325
polymerase chain reaction-restriction fragment-length polymorphism, 401
DNA melting temperature,
acaricide, 373
esterase, 373
polymerase chain reaction, 373
sodium channel, 373
dogwood borer,
antagonist-based mating disruption, 1085
apple, 1085
mass trapping, 1085
Sesiidae, 1085
dose response,
fertility table, 170
fitness, 170
natural enemy, 170
pest resurgence, 170
drone-brood trapping,
honey bee, 2033
IPM, 2033
Varroa destructor, 2033

E

(8*E*,10*E*)-tetradecadien-1-ol,
(8*E*,10*E*)-tetradecadien-1-yl acetate, 574
(8*E*,10*E*)-tetradecadien-1-yl formate, 574
(8*E*,10*E*)-tetradecadienal, 574
SPME, 574
(8*E*,10*E*)-tetradecadien-1-yl acetate,
(8*E*,10*E*)-tetradecadien-1-ol, 574
(8*E*,10*E*)-tetradecadien-1-yl formate, 574
(8*E*,10*E*)-tetradecadienal, 574
SPME, 574
(8*E*,10*E*)-tetradecadien-1-yl formate,
(8*E*,10*E*)-tetradecadien-1-ol, 574
(8*E*,10*E*)-tetradecadien-1-yl acetate, 574
(8*E*,10*E*)-tetradecadien-1-yl formate, 574
SPME, 574
(8*E*,10*E*)-tetradecadienal,
(8*E*,10*E*)-tetradecadien-1-ol, 574
(8*E*,10*E*)-tetradecadien-1-yl acetate, 574
(8*E*,10*E*)-tetradecadien-1-yl formate, 574
SPME, 574
economic injury level, 1536, 1827, 2109, 2146
corn, 2146
density–yield relationship, 1536
economic threshold, 1827
European corn borer, 2146
Gossypium hirsutum, 1827, 2109
Lissorhoptrus oryzophilus, 1536
Lygus lineolaris, 1827, 2109
Oryza sativa, 1536
Ostrinia nubilalis, 2146
planting date, 1536
silage, 2146
square retention, 2109
economic surplus,
impact assessment, 2116
IPM, 2116
soybean aphid, 2116
economic threshold,
economic injury level (EIL), 1827
Gossypium hirsutum, 1827
Lygus lineolaris, 1827
economic valuation,
factor of production, 467
pollinators, 467
yield enhancement, 467
economics,
integrated pest management, 1
public policy, 1
edge effect,
fiber quality, 1515
integrated pest management, 1515
Pentatomidae, 1515
stink bugs, 1515
efficacy,
green peach aphid, 1567
pest management, 1567
sweetpotato whitefly B-biotype, 1567
twospotted spider mite, 1567
egg collection,
artificial diet, 257
oviposition, 257
pepper weevil, 257
egg parasitoid,
biological control, 905
conservation, 905
Diaprepes root weevil, 905
pesticide residues, 905
Elateridae,
phylogenetics, 743
secondary pest, 743
wireworm, 743
electroantennography,
leafhopper, 974
olfactometry, 974
scanning electron microscopy, 974
Vitis, 974
electronic penetration graph,
antibiosis, 1291
plant resistance, 1291
tolerance index, 1291
electroretinogram,
emerald ash borer, 2160
insect trap color, 2160
spectral sensitivity, 2160
emamectin benzoate,
Dendroctonus frontalis, 1062
fipronil, 1062
Ips spp., 1062
single-tree protection, 1062
emerald ash borer,
electroretinogram, 2160
insect trap color, 2160
spectral sensitivity, 2160
emergence delay,
biofumigant, 2041
Rhagoletis indifferens, 2041
sublethal effects, 2041
volatile organic compounds, 2041
endectocide,
Amblyomma americanum, 804
delivery system, 804
Hematobia irritans, 804
Energy Independence and Security Act,
bioenergy, 2154
biomass, 2154
ethanol, 2154
pest, 2154
entomopathogenic nematodes,
Adalia bipunctata, 1440
Chrysoperla carnea, 1440
laboratory bioassay, 1440
predators, 1440
entrance reducer,
Aethina tumida, 13
resistance, 13
small hive beetle, 13
enzyme-linked immunosorbent assay,
Cry protein, 1301
transgenic cotton, 1301
WideStrike, 1301
Ephestia kuehniella,
digestion, 500
nutrition, 500
predatory behavior, 500
thrips, 500
Epinotia granitalis, 629, 629
Cryptomeria japonica, 629, 629
survival, 629, 629
eradication, 759, 799
Anthonomus grandis, 759
boll weevil, 759
Cochliomyia hominivorax, 799
mass rearing, 799
microsatellites, 759
molecular diagnostic, 759
New World screwworm, 799
error,
crop monitoring, 1336
imported cabbageworm, 1336
pest complex, 1336

precision, 1336
essential oil, 203, 304, 1551, 2090
biopesticides, 304
Chaetodactylus krombeini, 2090
estragole, 203
formic acid, 2090
fruit fly, 203
linalool, 203
Osmia cornifrons, 2090
Popillia japonica, 1551
reduced-risk insecticides, 304
semiochemicals, 1551
trans-anethole, 203
trap, 1551
wintergreen oil, 2090
esterase, 373, 1262
acaricide, 373
catalase, 1262
DNA melting temperature, 373
lipoxygenase, 1262
lipoxygenase 1, 1262
peroxidase, 1262
polymerase chain reaction, 373
sodium channel, 373
esterase bioassay,
Glycine max, 1209
neonicotinoid, 1209
Neotropical brown stink bug, 1209
topical application, 1209
estragole,
essential oil, 203
fruit fly, 203
linalool, 203
trans-anethole, 203
ethanol,
bioenergy, 2154
biomass, 2154
Energy Independence and Security Act, 2154
pest, 2154
eucalyptol,
botanical insecticides, 1383
fumigant activity, 1383
house fly, 1383
Musca domestica, 1383
European corn borer, 602, 624, 2146
above ground, 602
Bacillus thuringiensis, 624
below ground, 602
corn, 2146
economic injury level, 2146
evaluation technique, 624
herbivory, 602
model, 624
Ostrinia nubilalis, 2146
root-knot nematode, 602
silage, 2146
whorl-stage corn, 624
Euschistus servus, 229, 1344, 1915
Acrosternum hilare, 1344, 1915
azadirachtin, 1915
Glycine max, 229
Nezara viridula, 229, 1344
Piezodorus guildinii, 229
pyrethrins, 1915
sample size, 1344
spinosad, 1915
stink bug, 229
tally threshold, 1344
evaluation technique,
Bacillus thuringiensis, 624
European corn borer, 624
model, 624
whorl-stage corn, 624
excavated volume,
digging dynamics, 1393
Solenopsis invicta, 1393
Exomala,
Anomala orientalis, 659
pheromone dispensers, 659
Vaccinium corymbosum, 659
(Z)-7-tetradecen-2-one, 659
expression profile,
glutathione *S*-transferase, 1591
Bombyx mori, *1591*
insect virsues, 1591
pesticides, 1591
exurban forest,
freight analysis framework, 237
invasive species, 237
nonindigenous species, 237
wildland–urban interface, 237

F

F_2 screen, 381, 733
allele frequency, 733
Bt resistance, 733
Bt-resistance allele frequency, 381
Cry2Ab, 733
Helicoverpa punctigera, 733
Heliothis virescens, 381
insecticide resistance management, 381
single-pair families, 381
factor of production,
economic valuation, 467
pollinators, 467
yield enhancement, 467
fat body,
insecticides, 1506
Nilaparvata lugens, 1506
ovary, 1506
protein, 1506
fecundity, 133, 934, 1490
Aphis glycines, 133
development, 133, 1490
fertility, 1490
flight, 133
insect growth regulators, 1490
maternal effects, 133
Popillia japonica, 934
sex ratio, 934
Spodoptera littoralis, 1490
trap efficacy, 934
traps, 934
feeding,
behavioral resistance, 781
dispersal, 781
insect resistance management, 781
transgenic, 781
fermentation,
aggregation, 2224
attractant, 2224
fruit volatiles, 2224
mass trapping, 2224
fertility,
development, 1490
fecundity, 1490
insect growth regulators, 1490
Spodoptera littoralis, 1490
fertility table,
dose response, 170
fitness, 170
natural enemy, 170
pest resurgence, 170
fiber quality,
edge effect, 1515
integrated pest management, 1515
Pentatomidae, 1515
stink bugs, 1515
fipronil, 347, 366, 1062, 1586
Anoplolepis gracilipes, 1586
baiting, 1586
boric acid, 1586
cat flea, 366
Ctenocephalides felis, 366
Dendroctonus frontalis, 1062
emamectin benzoate, 1062
indoxacarb, 1586
insecticide resistance, 366
internalization, 347
Ips spp., 1062
Rdl, 366
Reticulitermes, 347
single-tree protection, 1062
toxicity, 347
transfer, 347
fitness,
dose response, 170
fertility table, 170
natural enemy, 170
pest resurgence, 170
fitness cost,
biological control, 1224
immune response, 1224
integrated resistance management, 1224
simulation modeling, 1224
flight,
Aphis glycines, 133
development, 133
fecundity, 133
maternal effects, 133
flight behavior,
Helicoverpa armigera, 95
light trapping, 95
migration, 95
radar observations, 95
floriculture,
biological control, 1896
integrated pest management, 1896
Rosa hybrida, 1896
Tetranychus urticae, 1896

foliar chemistry,
organic fertilizer, 160
pest response, 160
Pieris rapae crucivora, 160
synthetic fertilizer, 160
Fopius arisanus,
GF-120 NF Naturalyte Fruit Fly Bait, 1123
infestation, 1123
integrated pest management, 1123
trapping, 1123
foraging activity,
Linepithema humile, 1170
Mesolecanium fasciatum, 1170
pest management, 1170
foraging behavior,
attractant, 1175
termite control, 1175
tunneling, 1175
Force,
Bactrocera, 139
Ceratitis, 139
soil insecticides, 139
Warrior, 139
formic acid, 1729, 2090
Chaetodactylus krombeini, 2090
essential oil, 2090
honey bee mite, 1729
Nosema apis, 1729
Nosema ceranae, 1729
Osmia cornifrons, 2090
winter fumigation, 1729
wintergreen oil, 2090
formulation,
Beauveria bassiana, 1759
Soyscreen, 1759
UV screen, 1759
founder effect,
Diuraphis noxia, 440
Dn4 gene, 440
host plant resistance, 440
invasive species, 440
foxglove aphid,
cytochrome oxidase I, 398
glasshouse potato aphid, 398
Frankliniella occidentalis,
insecticide mixtures, 393
insecticide resistance, 393
synergism, 393
Thysanoptera, 393
Frankliniella tritici,
cotton, 887
Fusarium hardlock, 887
lambda-cyhalothrin, 887
thiophanate-methyl, 887
freight analysis framework,
exurban forest, 237
invasive species, 237
nonindigenous species, 237
wildland–urban interface, 237
friedelin,
Cacalia tangutica, 1444
cytotoxicity, 1444
insecticidal activity, 1444
stigmasterol, 1444
fruit fly, 203, 522, 1448
essential oil, 203
estragole, 203
Hass cultivar, 1448
heat treatments, 522
heating block system, 522
host status, 1448
linalool, 203
Persea americana, 1448
quarantine, 522
thermal death, 522
trans-anethole, 203
fruit fly attractants,
Anastrepha, 2371
Bactrocera, 2371
borax, 2371
NuLure, 2371
fruit fly management,
A. obliqua, 2268
Anastrepha ludens, 2268
host marking pheromones, 2268
Tephritidae, 2268
fruit thinning,
cultural control, 948
integrated pest management, 948
Lepidoptera, 948
fruit volatiles, 585, 2224
aggregation, 2224
Anastrepha ludens, 585
attractant, 585, 2224
bitter orange, 585
fermentation, 2224
kairomones, 585
mass trapping, 2224
fumigant activity,
botanical insecticides, 1383
eucalyptol, 1383
house fly, 1383
Musca domestica, 1383
fumigation, 79, 913
Bambusa, 913
bark beetles, 79
Chlorophorus, 913
methyl bromide, 913
push-pull strategy, 79
quarantine, 913
quarantine pest, 79
wood borers, 79
fungicide,
almond, 20
Captan, 20
compatibility, 1750
Dalotia, 1750
honey bee, 20
insecticides, 1750
survival, 1750
toxicity, 20
Fusarium hardlock,
cotton, 887
Frankliniella tritici, 887
lambda-cyhalothrin, 887
thiophanate-methyl, 887

G

G. mellonella,
glutathione, 152
malathion, 152
malondialdehyde, 152
superoxide dismutase, 152
gain threshold,
break-even analysis, 2101
IPM, 2101
Galandromus occidentalis,
lime sulfur, 324
Panonychus ulmi, 324
sulfur, 324
Tetranychus urticae, 324
GARP,
Ceratitis capitata, 1781
Ceratitis cosyra, 1781
Ceratitis rosa, 1781
Maxent, 1781
gelatin,
biological control, 58
corncob, 58
granular matrix, 58
HD-125 strain, 58
general esterases,
alkaline phosphatase, 1189
Chilo suppressalis, 1189
diazinon resistance, 1189
glutathione transferase, 1189
generalized linear mixed model,
action mechanism simulation, 1977
insect repellent, 1977
maize weevil, 1977
genetic control,
spatial modeling, 50
sterile insect technique, 50
genetic differentiation,
Apis, 1233
breeding program, 1233
Russian honey bees, 1233
genetic diversity,
A. m. carnica, 480
A. m. caucasica, 480
bee breeding, 480
phylogeny, 480
Geocoris punctipes,
Geocoris uliginosus, 1151
Orius insidiosus, 1151
Spodoptera frugiperda, 1151
turfgrass, 1151
Geocoris uliginosus,
Geocoris punctipes, 1151
Orius insidiosus, 1151
Spodoptera frugiperda, 1151
turfgrass, 1151
GF-120, 515, 1108, 1157, 1472
Apis mellifera, 1472
Bactrocera invadens, 515
Benin, 515
Ceratitis cosyra, 515
honey bee, 1472
Mangifera indica, 515
Mexican fruit fly, 1157
paraffin wax emulsion, 1108
rainfastness, 1108
Solbait, 1157
spinosad, 1108, 1472

Tephritidae, 1472
GF-120 NF Naturalyte Fruit Fly Bait,
Fopius arisanus, 1123
infestation, 1123
integrated pest management, 1123
trapping, 1123
glasshouse potato aphid,
cytochrome oxidase I, 398
foxglove aphid, 398
glassy-winged sharpshooter, 960, 1743
bacteria, 1743
citrus, 960
insect vector, 1743
insect–plant interactions, 960
leafhoppers, 1743
Pierce's disease, 1743
plant stress, 960
glutathione,
G. mellonella, 152
malathion, 152
malondialdehyde, 152
superoxide dismutase, 152
glutathione *S*-transferase, 1203, 1591
Bombyx mori, 1591
carboxyl-esterases, 1203
cytochrome P450, 1203
expression profile, 1591
insect virsues, 1591
pesticides, 1591
synergists, 1203
glutathione transferase,
alkaline phosphatase, 1189
Chilo suppressalis, 1189
diazinon resistance, 1189
general esterases, 1189
Glycine max, 187, 229, 1209, 1816
biological control, 1816
conservation, 1816
esterase bioassay, 1209
Euschistus servus, 229
imidacloprid, 187
insecticide regulation, 1816
neonicotinoid, 1209
Neotropical brown stink bug, 1209
Nezara viridula, 229
nontarget impacts, 1816
Piezodorus guildinii, 229
seed treatment, 187
stink bug, 229
thiamethoxam, 187
topical application, 1209
golf courses,
crane flies, 652
invasive insects, 652
Tipula oleracea, 652
Tipula paludosa, 652
Gossypium hirsutum, 1827, 2109
economic injury level, 1827, 2109
economic threshold, 1827
Lygus lineolaris, 1827, 2109
square retention, 2109
grain, 1360, 1673
development rates, 1360
inert dusts, 1673
Lepinotus reticulatus, 1673
Liposcelis decolor, 1673
Liposcelis entomophila, 1673
life history, 1360
stored products, 1360
grain storages,
booklice, 1714
cardboard refuges, 1714
numerical sampling, 1714
presence-absence sampling, 1714
granular matrix,
biological control, 58
corncob, 58
gelatin, 58
HD-125 strain, 58
Grapholita molesta,
Cydia pomonella, 315
Isomate, 315
mating disruption, 315
sex attractant pheromone, 315
Grapholita spp.,
Cydia pomonella, 2209
diagnostics, 2209
polymerase chain reaction-restriction fragment-length polymorphism, 2209
species identification, 2209
green peach aphid,
efficacy, 1567
pest management, 1567
sweetpotato whitefly B-biotype, 1567
twospotted spider mite, 1567
green walnut husks,
acaricidal activity, 196
methyl palmitate, 196
greenbug,
biotype, 1624
plant resistance, 1624
Schizaphis graminum, 1624
sorghum, 1624
greenhouse,
Ceratothripoides claratris, 1559
horticulture, 2198
immigration, 1559
insect vision, 1559
pest management, 2198
potassium silicate, 2198
silicon, 2198
UV, 1559
growing degree-days,
developmental rate, 637
tussock moth, 637
growth inhibition,
olive fruit fly, 2233
Peganum harmala, 2233
plant extract, 2233
repellence, 2233
guttation,
honey bee, 1808
neonicotinoid, 1808
seed coating, 1808

H

H. zea,
Bt, 1935
IC_{50}, 1935
LC_{50}, 1935
MIC_{50}, 1935
Habrobracon hebetor,
choice, 610
host instar, 610
parasitoid, 610
Plodia interpunctella, 610
hardening,
cucumber, 2265
plant attractiveness, 2265
transplant, 2265
whitefly, 2265
Hass cultivar,
fruit fly, 1448
host status, 1448
Persea americana, 1448
HD-125 strain,
biological control, 58
corncob, 58
gelatin, 58
granular matrix, 58
heat sterilization,
thermotolerance, 2048
wood borers, 2048
heat treatment, 522, 1075, 1182
bed bug, 1182
Cerambycidae, 1075
Cimex lectularius, 1182
control, 1182
Curculionidae, 1075
fruit fly, 522
heating block system, 522
lethal temperature, 1182
quarantine, 522
Scolytidae, 1075
Scolytinae, 1075
thermal death, 522
heating block system,
fruit fly, 522
heat treatments, 522
quarantine, 522
thermal death, 522
helicopter,
Bacillus thuringiensis variety *israelensis*, 507
catch-trays, 507
distribution pattern, 507
s-methoprene, 507
Helicoverpa armigera, 95, 708, 1197, 1217, 1928
Bacillus thuringiensis, 708
Benin Republic, 1928
Bollgard II, 708
Bt resistance, 708
Catharanthus roseus, 1197
cotton, 1928
cross-tolerance, 1217
Cry1Ac, 1217
Cry2Ab, 708, 1217
flight behavior, 95
light trapping, 95
migration, 95
oleic and linoleic acids, 1197
pyrethroids resistance, 1928

radar observations, 95
resistance stability, 1928
Helicoverpa punctigera,
allele frequency, 733
Bt resistance, 733
Cry2Ab, 733
F_2 screen, 733
Heliothis virescens,
Bt-resistance allele frequency, 381
F_2 screen, 381
insecticide resistance management, 381
single-pair families, 381
Hematobia irritans,
Amblyomma americanum, 804
delivery system, 804
endectocide, 804
hemlock woolly adelgid,
Adelges tsugae, 1247
host plant resistance, 1247
hybrid hemlock, 1247
herbicide,
Nanoviridae, 493
Pentalonia nigronervosa, 493
persistent virus, 493
herbivory, 412, 602
above ground, 602
below ground, 602
European corn borer, 602
photosynthesis, 412
photosynthetic pigments, 412
plant resistance, 412
plant–insect interactions, 412
root-knot nematode, 602
Hessian fly, 774, 1663
barley, 1663
biotype, 774
host plant resistance, 1663
Mayetiola destructor, 774
plant resistance, 774
rice, 1663
wheat, 1663
wheat breeding, 774
heterosis,
Diabrotica virgifera virgifera, 1317
native plant resistance, 1317
western corn rootworm, 1317
Hibiscus rosa-sinensis,
Allotropa sp. near *mecrida*, 1431
Anagyrus kamali, 1431
Maconellicoccus hirsutus, 1431
Mariana Islands, 1431
high-dose/refuge strategy,
Bt crops, 717
mathematical modeling, 717
resistance management, 717
RIDL, 717
honey bee, 20, 616, 1472, 1808, 2033
almond, 20
Apis mellifera, 1472
Captan, 20
drone-brood trapping, 2033
fungicide, 20
GF-120, 1472
guttation, 1808
imidacloprid, 616
IPM, 2033
mortality bees, 616
neonicotinoid, 1808
pesticides, 616
seed coating, 1808
seed-treated maize, 616
Spinosad, 1472
Tephritidae, 1472
toxicity, 20
Varroa destructor, 2033
honey bee mite,
formic acid, 1729
Nosema apis, 1729
Nosema ceranae, 1729
winter fumigation, 1729
horizontal toxicity,
barrier, 2279
contact toxicity, 2279
insecticide, 2279
Linepithema humile, 2279
hornfaced bee,
degree-day, 2026
pollination, 2026
horticulture,
greenhouse, 2198
pest management, 2198
potassium silicate, 2198
silicon, 2198
host instar,
choice, 610
Habrobracon hebetor, 610
parasitoid, 610
Plodia interpunctella, 610
host marking pheromones,
A. obliqua, 2268
Anastrepha ludens, 2268
fruit fly management, 2268
Tephritidae, 2268
host odor,
color, 954
shape, 954
size, 954
tephritids, 954
host plant resistance, 432, 440, 1247, 1270, 1281, 1309, 1628, 1663, 2192
Adelges tsugae, 1247
adult damage, 1309
barley, 1663
Brachiaria, 1309
Captiva, 432
cultural control, 2192
Cylindrocopturus adspersus, 1281
Dectes texanus, 1281
Diuraphis noxia, 440
Dn4 gene, 440
founder effect, 440
hemlock woolly adelgid, 1247
Hessian fly, 1663
hybrid hemlock, 1247
invasive species, 440
IPM, 2192
leaf sheath anatomy, 432
Leptinotarsa decimlineata, 1270
lignification, 432
Orseolia oryzae, 1628
Oryza sativa, 1628
Pelochrista womonana, 1281
Popillia japonica, 2192
resistance categories, 1628
rice, 1663
soil ecology, 2192
Solanum tuberosum, 1270
southern chinch bug, 432
spittlebugs, 1309
sunflower, 1281
transformation, 1270
wheat, 1663
host preference, 1009, 1908
attractant, 1009
developmental biology, 1908
Leptoglossus zonatus, 1908
Satsuma mandarin, 1908
semiochemicals, 1009
trap crops, 1009
(Z)-3-hexenyl acetate, 1009
host resistance,
Colorado potato beetle, 422
potato, 422
Solanum, 422
wild species, 422
host search behavior,
bioassay, 558
Diabrotica virgifera virgifera, 558
Zea mays, 558
host status, 921, 1448
fruit fly, 1448
Hass cultivar, 1448
medfly, 921
nonhost, 921
Persea americana, 1448
poor host, 921
quarantine pest, 921
house fly,
botanical insecticides, 1383
eucalyptol, 1383
fumigant activity, 1383
Musca domestica, 1383
huanglongbing, 247, 446, 685
biological control, 247
citrus, 685
citrus greening disease, 247, 446, 685
Citrus sinensis, 247
Diaphorina citri, 247, 685
psyllid, 446
temperature-dependent toxicity, 685
Humulus lupulus,
conservation biological control, 274
Phorodon humuli, 274
Podosphaera macularis, 274
predaceous mites, 274
hybrid hemlock,
Adelges tsugae, 1247
hemlock woolly adelgid, 1247
host plant resistance, 1247
hygienic behavior,
Apis mellifera, 485
Nosema spp., 485
Varroa destructor, 485

I

IC_{50},
Bt, 1935
H. zea, 1935
LC_{50}, 1935
MIC_{50}, 1935
imaging,
colocalization, 453
dissemination, 453
Indianmeal moth, 453
powder, 453
imidacloprid, 187, 616, 2255
bioassay, 2255
cucurbit, 2255
Glycine max, 187
honey bees, 616
mortality bees, 616
pesticides, 616
seed treatment, 187
seed-treated maize, 616
striped cucumber beetle, 2255
thiamethoxam, 187
immigration,
Ceratothripoides claratris, 1559
greenhouses, 1559
insect vision, 1559
UV, 1559
immune response,
biological control, 1224
fitness cost, 1224
integrated resistance management, 1224
simulation modeling, 1224
impact assessment,
economic surplus, 2116
IPM, 2116
soybean aphid, 2116
imported cabbageworm,
crop monitoring, 1336
error, 1336
pest complex, 1336
precision, 1336
Indianmeal moth, 453, 2003
codling moth, 2003
colocalization, 453
dissemination, 453
imaging, 453
navel orangeworm, 2003
powder, 453
tree nuts, 2003
vacuum treatment, 2003
indoxacarb,
Anoplolepis gracilipes, 1586
baiting, 1586
boric acid, 1586
fipronil, 1586
inert dusts,
grains, 1673
Lepinotus reticulatus, 1673
Liposcelis decolor, 1673
Liposcelis entomophila, 1673
infestation,
Fopius arisanus, 1123
GF-120 NF Naturalyte Fruit Fly Bait, 1123
integrated pest management, 1123
trapping, 1123
inheritance,
antibiosis, 1654
Diuraphis noxia, 1654
resistance, 1654
wheat, 1654
inhibition of egg hatch,
Leptinotarsa decemlineata, 2078
novaluron, 2078
sublethal effect, 2078
insect artificial diet comparison,
Cry1Ac-susceptibility, 1599
larval growth, 1599
tobacco budworm, 1599
insect growth regulator,
bioassay, 1864
neonicotinoid, 1864
organophosphate, 1864
residue profile, 1864
insect growth regulators,
development, 1490
fecundity, 1490
fertility, 1490
Spodoptera littoralis, 1490
insect repellent,
action mechanism simulation, 1977
generalized linear mixed model, 1977
maize weevil, 1977
insect resistance categories,
antibiosis, 1255
Diuraphis noxia, 1255
proportional plant dry weight change, 1255
tolerance index, 1255
insect resistance management, 781, 2096
behavioral resistance, 781
dispersal, 781
feeding, 781
mating behavior, 2096
reproductive behavior, 2096
transgenic, 781
insect trap color,
electroretinogram, 2160
emerald ash borer, 2160
spectral sensitivity, 2160
insect vector,
bacteria, 1743
glassy-winged sharpshooter, 1743
leafhoppers, 1743
Pierce's disease, 1743
insect virsues,
glutathione S-transferase, 1591
Bombyx mori, 1591
expression profile, 1591
pesticides, 1591
insect vision,
Ceratothripoides claratris, 1559
greenhouse, 1559
immigration, 1559
UV, 1559
Insecta,
integrated pest management, 767
Mamestra brassicae, 767
Pieris brassicae, 767
Pieris rapae, 767
insecticidal activity,
Cacalia tangutica, 1444
cytotoxicity, 1444
friedelin, 1444
stigmasterol, 1444
insecticidal control,
IPM, 677
odds ratio, 677
insecticide mixtures,
Frankliniella occidentalis, 393
insecticide resistance, 393
synergism, 393
Thysanoptera, 393
insecticide regulation,
biological control, 1816
conservation, 1816
Glycine max, 1816
nontarget impacts, 1816
insecticide resistance, 366, 393, 699, 2289
acephate, 699
cat flea, 366
corn earworm, 2289
Ctenocephalides felis, 366
fipronil, 366
Frankliniella occidentalis, 393
insecticide mixtures, 393
Lygus lineolaris, 699
pyrethroid, 2289
Rdl, 366
synergism, 393
tarnished plant bug, 699
Thysanoptera, 393
insecticide resistance management,
Bt-resistance allele frequency, 381
F_2 screen, 381
Heliothis virescens, 381
single-pair families, 381
insecticide synergism,
Cimex lectularius, 2310
P450, 2310
piperonyl butoxide, 2310
pyrethroid resistance, 2310
insecticides, 177, 1506, 1750, 2279
alfalfa leafcutting bee, 177
barrier, 2279
bumble bee, 177
compatibility, 1750
contact toxicity, 2279
Dalotia, 1750
direct contact toxicity, 177
fat body, 1506
fungicides, 1750
horizontal toxicity, 2279
Linepithema humile, 2279
Nilaparvata lugens, 1506
O. lignaria, 177
ovary, 1506
protein, 1506
survival, 1750
insect–plant interactions, 960, 1116
arthropod diversity, 1116
citrus, 960

glassy-winged sharpshooter, 960
insect–plant interactions, 960, 1116
plant stress, 960
predatory Heteroptera, 1116
turfgrass, 1116
insector probe traps,
cardboard refuges, 1377
population dynamics, 1377
stored products, 1377
integrated pest management, 1, 296, 692, 767, 948, 1101, 1123, 1515, 1896
Acalymma vittatum, 1101
biological control, 1896
butternut squash, 1101
citrus, 296
coverage, 296
Cucurbita maxima, 1101
cultural control, 948
economics, 1
edge effect, 1515
fiber quality, 1515
floriculture, 1896
Fopius arisanus, 1123
fruit thinning, 948
GF-120 NF Naturalyte Fruit Fly Bait, 1123
infestation, 1123
Insecta, 767
Lepidoptera, 948
Mamestra brassicae, 767
Pentatomidae, 1515
perimeter trap crops, 1101
phenology, 692
Pieris brassicae, 767
Pieris rapae, 767
public policy, 1
Rosa hybrida, 1896
soft scale, 296
spray effectiveness, 296
stink bugs, 1515
Tetranychus urticae, 1896
trapping, 1123
Vitis, 692
integrated resistance management,
biological control, 1224
fitness cost, 1224
immune response, 1224
simulation modeling, 1224
intercropping, 219, 999
Allium porum, 999
canola, 219
Delia spp., 219
oilseed rape, 219
olfactometry, 999
Ophiomyia phaseoli, 999
plant protection, 999
root maggots, 219
internal CO_2 concentration,
net CO_2 assimilation, 1141
Diaprepes abbreviatus, 1141
stomatal conductance, 1141
transpiration, 1141
internal transcribed spacer,
barcodes, 2333
nested polymerase chain reaction, 2333
Tortricidae, 2333
internal transcriber spacer 2,
armored scale insects, 1948
avocado, 1948
Diaspididae, 1948
species-specific multiplex-polymerase chain reaction, 1948
internalization,
fipronil, 347
Reticulitermes, 347
toxicity, 347
transfer, 347
invasive,
Ceratitis, 401
DNA barcode, 401
pathway analysis, 401
polymerase chain reaction-restriction fragment-length polymorphism, 401
invasive insects,
crane flies, 652
golf courses, 652
Tipula oleracea, 652
Tipula paludosa, 652
invasive pests,
Abgrallaspis aguacatae, 855
crawlers, 855
Diaspididae, 855
risk assessment, 855
invasive species, 237, 440, 981, 1133, 1399, 1460
Bactrocera invadens, 981
blacklight trap, 1133
Ceratitis cosyra, 981
competitive displacement, 981
critical fruit damage stage, 1133
detection, 1460
Diuraphis noxia, 440
Dn4 gene, 440
exurban forest, 237
founder effect, 440
freight analysis framework, 237
host plant resistance, 440
ionizing radiation, 1399
irradiation, 1399
native species, 981
nonindigenous species, 237
postharvest phytosanitary treatment, 1399
quarantine pest, 1399
Stenoma catenifer, 1460
stink bug, 1133
wildland–urban interface, 237
(6Z,9Z)-tricosadiene, 1460
(9Z)-9,13-tetradecadien-11-ynal, 1460
ionizing radiation, 1399, 1774
invasive species, 1399
irradiation, 1399
Planococcus minor, 1774
postharvest phytosanitary treatment, 1399
quarantine, 1774
quarantine pest, 1399
IPM, 287, 677, 1032, 1649, 2033, 2101, 2116, 2192
biocontrol, 287
break-even analysis, 2101
chemical control, 1032
clone, 1649
Columbia Basin, 1649
cultural control, 2192
drone-brood trapping, 2033
economic surplus, 2116
gain threshold, 2101
honey bee, 2033
host plant resistance, 2192
impact assessment, 2116
insecticidal control, 677
odds ratio, 677
Ostrinia nubilalis, 287
pepper, 287
Phthorimaea operculella, 1649
Popillia japonica, 2192
potato, 1032, 1649
soil ecology, 2192
soybean aphid, 2116
Trichogramma ostriniae, 287
Varroa destructor, 2033
zebra chip disease, 1032
Ips spp.,
Dendroctonus frontalis, 1062
emamectin benzoate, 1062
fipronil, 1062
single-tree protection, 1062
irradiation, 64, 1399
commodity treatment, 64
disinfestations, 64
invasive species, 1399
ionizing radiation, 1399
Ostrinia nubilalis, 64
postharvest phytosanitary treatment, 1399
quarantine, 64
quarantine pest, 1399
irrigation,
Cucurbita, 563
Peponapis, 563
sustainable agriculture, 563
tillage, 563
Isomate,
Cydia pomonella, 315
Grapholita molesta, 315
mating disruption, 315
sex attractant pheromone, 315
Iwao's method,
Bartlett's sequential hypothesis test, 1970
Iwao's method, 1970
three-hypothesis testing, 1970
Wald's sequential hypothesis test, 1970
Ixodes scapularis,
Amblyomma americanum, 2316
carvacrol, 2316
nootkatone, 2316
tick control, 2316

K

kairomones,
Anastrepha ludens, 585
attractants, 585
bitter orange, 585
fruit volatiles, 585
kdr,
onion thrips, 2296
point mutation, 2296
pyrethroid resistance, 2296
sodium channel, 2296
kill strip,
Anthonomus grandis, 183
boll weevil, 183
dichlorovos, 183
pheromone traps, 183
kinesis,
attraction, 2056
locomotor initiator, 2056
repellency, 2056
taxis, 2056

L

L. maculicollis,
pyrethroids, 388
resistance, 388
laboratory bioassay,
Adalia bipunctata, 1440
Chrysoperla carnea, 1440
entomopathogenic nematodes, 1440
predators, 1440
laboratory colonization,
Anastrepha obliqua, 542
demographic changes, 542
mass rearing, 542
sterile insect technique, 542
laboratory method,
bioassays, 2084
lethal concentration, 2084
Tetranychus urticae, 2084
lambda-cyhalothrin,
cotton, 887
Frankliniella tritici, 887
Fusarium hardlock, 887
thiophanate-methyl, 887
LAMP,
Ceratitis capitata, 1239
molecular identification, 1239
quarantine, 1239
larval diet,
Centris analis, 265
crop pollination, 265
Malpighia emarginata, 265
larval growth,
Cry1Ac-susceptibility, 1599
insect artificial diet comparison, 1599
tobacco budworm, 1599
Latrodectus,
Arachnida, 1396
black widow spider, 1396
pest control, 1396
urban entomology, 1396
LC_{50},
Bt, 1935
H. zea, 1935
IC_{50}, 1935
MIC_{50}, 1935
LD_{50},
México, 1737
pesticide, 1737
stingless bee, 1737
leaf sheath anatomy,
Captiva, 432
host plant resistance, 432
lignification, 432
southern chinch bug, 432
leafhopper,
bacteria, 1743
electroantennography, 974
glassy-winged sharpshooter, 1743
insect vector, 1743
olfactometry, 974
Pierce's disease, 1743
scanning electron microscopy, 974
Vitis, 974
leafhopper vectors,
carrot purple leaf disease, 1417
citrus stubborn disease, 1417
propagative transmission, 1417
Lepidiota,
acoustic detection, 1523
Antitrogus consanguineus, 1523
Antitrogus parvulus, 1523
Dermolepida albohirtum, 1523
Lepidoptera,
cultural control, 948
fruit thinning, 948
integrated pest management, 948
Lepinotus reticulatus,
grains, 1673
inert dusts, 1673
Liposcelis decolor, 1673
Liposcelis entomophila, 1673
Leptinotarsa decemlineata,
inhibition of egg hatch, 2078
novaluron, 2078
sublethal effect, 2078
Leptinotarsa decimlineata,
host plant resistance, 1270
Solanum tuberosum, 1270
transformation, 1270
Leptoglossus zonatus,
developmental biology, 1908
host preference, 1908
Satsuma mandarin, 1908
lethal concentration,
bioassays, 2084
laboratory method, 2084
Tetranychus urticae, 2084
lethal temperature,
bed bug, 1182
Cimex lectularius, 1182
control, 1182
heat treatment, 1182
life history,
development rates, 1360
grain, 1360
stored products, 1360
life table, 595, 1018, 1705
biological control, 1018
Bt transgenic cotton, 1018
development, 1705
Liposcelis paeta, 1705
percentage of parasitism, 1018
spider mite, 595
stored product, 1705
temperature, 1705
temporal abundance, 1018
Tetranychus urticae, 595
light trapping,
flight behavior, 95
Helicoverpa armigera, 95
migration, 95
radar observations, 95
lignification,
Captiva, 432
host plant resistance, 432
leaf sheath anatomy, 432
southern chinch bug, 432
lime sulfur,
Galandromus occidentalis, 324
Panonychus ulmi, 324
sulfur, 324
Tetranychus urticae, 324
linalool,
essential oil, 203
estragole, 203
fruit fly, 203
trans-anethole, 203
Linepithema humile, 1170, 2279
barrier, 2279
contact toxicity, 2279
foraging activity, 1170
horizontal toxicity, 2279
insecticide, 2279
Mesolecanium fasciatum, 1170
pest management, 1170
lipid,
alfalfa, 1407
alfalfa leafcutting bee, 1407
Medicago sativa, 1407
Liposcelis decolor,
grains, 1673
inert dusts, 1673
Lepinotus reticulatus, 1673
Liposcelis entomophila, 1673
Liposcelis entomophila,
grains, 1673
inert dusts, 1673
Lepinotus reticulatus, 1673
Liposcelis decolor, 1673
Liposcelis paeta,
development, 1705
life table, 1705
stored product, 1705
temperature, 1705
lipoxygenase,
catalase, 1262
esterase, 1262
lipoxygenase 1, 1262
peroxidase, 1262
lipoxygenase 1,
catalase, 1262
esterase, 1262
lipoxygenase, 1262
peroxidase, 1262

Lissorhoptrus oryzophilus, 1536, 1837
density–yield relationship, 1536
economic injury level, 1536
Oryza sativa, 1536
planting date, 1536
rice, 1837
rice water weevil, 1837
seeding rate, 1837
yield loss, 1837
Listronotus maculicollis,
binomial sequential sampling, 1325
resampling validation, 1325
turfgrass, 1325
locomotor initiator,
attraction, 2056
kinesis, 2056
repellency, 2056
taxis, 2056
lodging,
Ataxia hubbardi, 1044
Cylindrocopturus adspersus, 1044
plant population, 1044
soil moisture, 1044
long-lasting insecticide treated nets,
direct behavioral observations, 2061
loss of host cues, 2061
malaria vector, 2061
longevity,
behavior, 105
butterfly, 105
cost-effective, 105
mark–recapture, 105
loss of host cues,
direct behavioral observations, 2061
long-lasting insecticide treated nets, 2061
malaria vector, 2061
lure,
Cimex lectularius, 1580
monitoring, 1580
trap, 1580
lure and kill,
attract and kill, 815
attracticides, 815
pheromones, 815
semiochemicals, 815
Lygus lineolaris, 699, 1827, 2109
acephate, 699
economic injury level, 1827, 2109
economic threshold, 1827
Gossypium hirsutum, 1827, 2109
insecticide resistance, 699
square retention, 2109
tarnished plant bug, 699

M

Maconellicoccus hirsutus,
Allotropa sp. near *mecrida*, 1431
Anagyrus kamali, 1431
Hibiscus rosa-sinensis, 1431
Mariana Islands, 1431
macrocyclic lactones,
acaricidal activity, 809
oral treatment, 809
maize, 1352, 2350
abamectin, 1352
antibiosis, 2350
Diabrotica virgifera virgifera, 2350
plant resistance, 2350
stored-product pests, 1352
temperature, 1352
wheat, 1352
maize weevil,
action mechanism simulation, 1977
generalized linear mixed model, 1977
insect repellent, 1977
malaria vector,
direct behavioral observations, 2061
long-lasting insecticide treated nets, 2061
loss of host cues, 2061
malathion,
G. mellonella, 152
glutathione, 152
malondialdehyde, 152
superoxide dismutase, 152
malondialdehyde,
G. mellonella, 152
glutathione, 152
malathion, 152
superoxide dismutase, 152
Malpighia emarginata,
Centris analis, 265
crop pollination, 265
larval diet, 265
Mamestra brassicae,
Insecta, 767
integrated pest management, 767
Pieris brassicae, 767
Pieris rapae, 767
Mangifera indica,
Bactrocera invadens, 515
Benin, 515
Ceratitis cosyra, 515
GF-120, 515
Mariana Islands,
Allotropa sp. near *mecrida*, 1431
Anagyrus kamali, 1431
Hibiscus rosa-sinensis, 1431
Maconellicoccus hirsutus, 1431
mark–recapture,
behavior, 105
butterfly, 105
cost-effective, 105
longevity, 105
mark–recapture, 105
mass rearing, 542, 799, 941
^{13}C, 941
Anastrepha obliqua, 542
Cochliomyia hominivorax, 799
demographic changes, 542
eradication, 799
laboratory colonization, 542
Mediterranean fruit flies, 941
New World screwworm, 799
stable isotopes, 941
sterile insect technique, 542, 941
mass trapping, 1085, 1094, 2224
aggregation, 2224
antagonist-based mating disruption, 1085
apple, 1085
attractant, 2224
Chilo suppressalis, 1094
dogwood borer, 1085
fermentation, 2224
fruit volatiles, 2224
mesoporous dispenser, 1094
pest monitoring, 1094
pheromone, 1094
Sesiidae, 1085
maternal effects,
Aphis glycines, 133
development, 133
fecundity, 133
flight, 133
mathematical modeling,
Bt crops, 717
high-dose/refuge strategy, 717
resistance management, 717
RIDL, 717
mating behavior,
insect resistance management, 2096
reproductive behavior, 2096
mating disruption,
Cydia pomonella, 315
Grapholita molesta, 315
Isomate, 315
sex attractant pheromone, 315
Maxent,
Ceratitis capitata, 1781
Ceratitis cosyra, 1781
Ceratitis rosa, 1781
GARP, 1781
Mayetiola destructor,
biotype, 774
Hessian fly, 774
plant resistance, 774
wheat breeding, 774
medfly,
host status, 921
nonhost, 921
poor host, 921
quarantine pest, 921
Medicago sativa,
alfalfa, 1407
alfalfa leafcutting bee, 1407
lipid, 1407
Mediterranean fruit fly,
^{13}C, 941
mass rearing, 941

melon fly, 1859
nonhost, 1859
oriental fruit fly, 1859
stable isotopes, 941
sterile insect technique, 941
Vaccinium spp., 1859
Megaplatypus mutatus,
pheromone, 1546
(+)-sulcatol, 1546
sulcatone, 1546
trap design, 1546
Melittia oedipus,
adult orientation, 127
Coccinia grandis, 127
olfactory cues, 127
visual cues, 127
melon fly,
Mediterranean fruit fly, 1859
nonhost, 1859
oriental fruit fly, 1859
Vaccinium spp., 1859
Mesolecanium fasciatum,
foraging activity, 1170
Linepithema humile, 1170
pest management, 1170
mesoporous dispenser,
Chilo suppressalis, 1094
mass trapping, 1094
pest monitoring, 1094
pheromone, 1094
methoprene,
P. interpunctella, 1992
packaging materials, 1992
temperature, 1992
methyl bromide,
Bambusa, 913
Chlorophorus, 913
fumigation, 913
quarantine, 913
methyl palmitate,
acaricidal activity, 196
green walnut husks, 196
Mexican fruit fly,
GF-120, 1157
Solbait, 1157
México,
LD_{50}, 1737
pesticide, 1737
stingless bee, 1737
MIC_{50},
Bt, 1935
H. zea, 1935
IC_{50}, 1935
LC_{50}, 1935
microbial control,
apple exportation, 43
postharvest, 43
quarantine treatments, 43
microsatellite markers,
Bemisia argentifolii, 670
mitochondrial cytochrome oxidase I subunit, 670
silverleaf whitefly, 670
microsatellites, 759, 1389
Anthonomus grandis, 759
Aphis glycines, 1389
boll weevil, 759
cross-species amplification, 1389
eradication, 759
molecular diagnostic, 759
soybean aphid, 1389
midgut trypsin-like proteinases,
Achaea janata, 2343
Cajanus cajan, 2343
proteinase inhibitor, 2343
Spodoptera litura, 2343
migration, 95, 210
corn, 210
cotton, 210
flight behavior, 95
Helicoverpa armigera, 95
light trapping, 95
radar observations, 95
Spodoptera Frugiperda, 210
mitochondria,
Bemisia tabaci, 750
cytochrome oxidase I, 750
whitefly, 750
mitochondrial cytochrome oxidase I subunit,
Bemisia argentifolii, 670
microsatellite markers, 670
silverleaf whitefly, 670
model,
Bacillus thuringiensis, 624
European corn borer, 624
evaluation technique, 624
whorl-stage corn, 624
molecular diagnostic,
Anthonomus grandis, 759
boll weevil, 759
eradication, 759
microsatellites, 759
molecular identification,
Ceratitis capitata, 1239
LAMP, 1239
quarantine, 1239
monitoring, 1580, 2072
attractants, 2072
Cimex lectularius, 1580
lure, 1580
Spondias mombin, 2072
trap, 1580
volatiles, 2072
West Indian fruit fly, 2072
mortality bees,
honey bees, 616
imidacloprid, 616
pesticides, 616
seed-treated maize, 616
multigeneration,
demography, 357
Plutella xylostella, 357
spinosad, 357
sublethal effect, 357
Musa sp.,
Nanoviridae, 897
Pentalonia nigronervosa, 897
resistance, 897
Musca domestica,
botanical insecticides, 1383
eucalyptol, 1383
fumigant activity, 1383
house fly, 1383
Muscidae,
colonization, 788
dairy farms, 788
dispersal, 788
stable fly, 788
Myzus persicae,
biological control, 2183
pepper, 2183
plant growth-promoting rhizobacteria, 2183

N

naled,
B. cucurbitae, 552
Bactrocera dorsalis, 552
spinosad, 552
Tephritid flies, 552
Nanoviridae, 493, 897
herbicide, 493
Musa sp., 897
Pentalonia nigronervosa, 493, 897
persistent virus, 493
resistance, 897
native plant resistance,
Diabrotica virgifera virgifera, 1317
heterosis, 1317
western corn rootworm, 1317
native species,
Bactrocera invadens, 981
Ceratitis cosyra, 981
competitive displacement, 981
invasive species, 981
natural enemies,
Diatraea saccharalis, 1054
dose response, 170
fertility table, 170
fitness, 170
pest resurgence, 170
Solenopsis invicta, 1054
sugarcane integrated pest management, 1054
navel orangeworm,
codling moth, 2003
Indianmeal moth, 2003
tree nuts, 2003
vacuum treatment, 2003
neonicotinoid, 927, 1209, 1808, 1864, 1884, 2126, 2241
anthranilic diamide, 927
bioassay, 1864
cabbage crowngall fly, 2241
cabbage gall midge, 2241
Contarinia nasturtii, 2241
curative activity, 1884
esterase bioassay, 1209
Glycine max, 1209
guttation, 1808
honey bee, 1808
insect growth regulator, 1864
Neotropical brown stink bug, 1209
organophosphate, 1864, 1884
ornamental plants, 927
Otiorhynchus sulcatus, 927
pyrethroids, 2126, 2241

residue profile, 1864, 1884
Rhagoletis pomonella, 1884
seed coating, 1808
seed treatments, 2126
topical application, 1209
wheat, 2126
wireworms, 2126
Neoseiulus californicus,
Aphidius colemani, 144
baited insecticides, 144
Cryptolaemus montrouzieri, 144
Neotropical brown stink bug,
esterase bioassay, 1209
Glycine max, 1209
neonicotinoid, 1209
topical application, 1209
nested polymerase chain reaction,
barcodes, 2333
internal transcribed spacer, 2333
Tortricidae, 2333
net CO_2 assimilation,
Diaprepes abbreviatus, 1141
internal CO_2 concentration, 1141
stomatal conductance, 1141
transpiration, 1141
New World screwworm,
Cochliomyia hominivorax, 799
eradication, 799
mass rearing, 799
Nezara viridula, 229, 1344
Euschistus servus, 229, 1344
Glycine max, 229
Piezodorus guildinii, 229
sample size, 1344
stink bug, 229
tally threshold, 1344
Nilaparvata lugens,
fat body, 1506
insecticides, 1506
ovary, 1506
protein, 1506
noncrop habitats,
aphid parasitoids, 836
crop habitats, 836
southeastern Europe, 836
tritrophic interactions, 836
nonhost, 921, 1859
host status, 921
medfly, 921
Mediterranean fruit fly, 1859
melon fly, 1859
oriental fruit fly, 1859
poor host, 921
quarantine pest, 921
Vaccinium spp., 1859
nonindigenous species,
exurban forest, 237
freight analysis framework, 237
invasive species, 237
wildland–urban interface, 237
nontarget impacts,
biological control, 1816
conservation, 1816
Glycine max, 1816
insecticide regulation, 1816
nootkatone,
Amblyomma americanum, 2316
carvacrol, 2316
Ixodes scapularis, 2316
tick control, 2316
Northern masked chafer,
Bacillus thuringiensis serovar *japonensis*, 1891
oriental beetle, 1891
Scarabaeidae, 1891
Nosema apis,
formic acid, 1729
honey bee mite, 1729
Nosema ceranae, 1729
winter fumigation, 1729
Nosema ceranae,
formic acid, 1729
honey bee mite, 1729
Nosema apis, 1729
winter fumigation, 1729
Nosema spp.,
Apis mellifera, 485
hygienic behavior, 485
Varroa destructor, 485
novaluron,
inhibition of egg hatch, 2078
Leptinotarsa decemlineata, 2078
sublethal effect, 2078
nucleopolyhedrovirus,
cocoa, 1767
coffee, 1767
Spodoptera exigua, 1767
UV radiation, 1767
NuLure,
Anastrepha, 2371
Bactrocera, 2371
borax, 2371
fruit fly attractants, 2371
numerical sampling,
booklice, 1714
cardboard refuges, 1714
grain storages, 1714
presence-absence sampling, 1714
nutrition,
digestion, 500
Ephestia kuehniella, 500
predatory behavior, 500
thrips, 500

O

O. lignaria,
alfalfa leafcutting bee, 177
bumble bee, 177
direct contact toxicity, 177
insecticides, 177
odds ratio,
insecticidal control, 677
IPM, 677
oilseed rape,
canola, 219
Delia spp., 219
intercropping, 219
root maggots, 219
oleic and linoleic acids,
Catharanthus roseus, 1197
Helicoverpa armigera, 1197
olfactometry, 974, 999
Allium porum, 999
electroantennography, 974
intercropping, 999
leafhopper, 974
Ophiomyia phaseoli, 999
plant protection, 999
scanning electron microscopy, 974
Vitis, 974
olfactory cues,
adult orientation, 127
Coccinia grandis, 127
Melittia oedipus, 127
visual cues, 127
olive fruit fly,
growth inhibition, 2233
Peganum harmala, 2233
plant extract, 2233
repellence, 2233
onion thrips, 1468, 2296
kdr, 2296
point mutation, 2296
pyrethroid resistance, 2296
semiochemicals, 1468
sodium channel, 2296
Thrips obscuratus, 1468
Thrips tabaci, 1468
Ophiomyia phaseoli,
Allium porum, 999
intercropping, 999
olfactometry, 999
plant protection, 999
oral treatment,
acaricidal activity, 809
macrocyclic lactones, 809
organic fertilizer,
foliar chemistry, 160
pest response, 160
Pieris rapae crucivora, 160
synthetic fertilizer, 160
organophosphate, 1864, 1884
bioassay, 1864
curative activity, 1884
insect growth regulator, 1864
neonicotinoid, 1864, 1884
residue profile, 1864, 1884
Rhagoletis pomonella, 1884
oriental beetle,
Bacillus thuringiensis serovar *japonensis*, 1891
Northern masked chafer, 1891
Scarabaeidae, 1891
oriental fruit fly,
Mediterranean fruit fly, 1859
melon fly, 1859
nonhost, 1859
Vaccinium spp., 1859
Orius insidiosus,
Geocoris punctipes, 1151
Geocoris uliginosus, 1151
Spodoptera frugiperda, 1151
turfgrass, 1151

ornamental plants,
anthranilic diamide, 927
neonicotinoids, 927
Otiorhynchus sulcatus, 927
Orseolia oryzae,
host plant resistance, 1628
Oryza sativa, 1628
resistance categories, 1628
Oryza sativa, 1536, 1628
density–yield relationship, 1536
economic injury level, 1536
host plant resistance, 1628
Lissorhoptrus oryzophilus, 1536
Orseolia oryzae, 1628
planting date, 1536
resistance categories, 1628
Osmia cornifrons,
Chaetodactylus krombeini, 2090
essential oil, 2090
formic acid, 2090
wintergreen oil, 2090
Ostrinia nubilalis, 64, 287, 2146
biocontrol, 287
commodity treatment, 64
corn, 2146
disinfestations, 64
economic injury level, 2146
European corn borer, 2146
IPM, 287
irradiation, 64
pepper, 287
quarantine, 64
silage, 2146
Trichogramma ostriniae, 287
Otiorhynchus sulcatus,
anthranilic diamide, 927
neonicotinoids, 927
ornamental plants, 927
ovary,
fat body, 1506
insecticides, 1506
Nilaparvata lugens, 1506
protein, 1506
oviposition,
artificial diet, 257
egg collection, 257
pepper weevil, 257
oviposition distribution,
area under the receiver operating characteristic curve, 1985
Ceratitis capitata, 1985
clustered data, 1985
receiver operating characteristic curve, 1985

P

P450,
Cimex lectularius, 2310
insecticide synergism, 2310
piperonyl butoxide, 2310
pyrethroid resistance, 2310
P. interpunctella,
methoprene, 1992
packaging materials, 1992
temperature, 1992
packaging materials,
methoprene, 1992
P. interpunctella, 1992
temperature, 1992
Panonychus ulmi,
Galandromus occidentalis, 324
lime sulfur, 324
sulfur, 324
Tetranychus urticae, 324
paraffin wax emulsion,
GF-120, 1108
rainfastness, 1108
spinosad, 1108
parameter selection,
decision probability matrix, 1874
resampling software, 1874
Trichoplusia ni, 1874
parasitoid,
choice, 610
Habrobracon hebetor, 610
host instar, 610
Plodia interpunctella, 610
pathway analysis, 401, 2325
biocontrol, 2325
Ceratitis, 401
citrus greening, 2325
DNA barcode, 401, 2325
invasive, 401
polymerase chain reaction-restriction fragment-length polymorphism, 401
PCR,
diagnostics, 8
Planococcus citri, 8
Planococcus minor, 8
restriction fragment length polymorphism, 8
Peganum harmala,
growth inhibition, 2233
olive fruit fly, 2233
plant extract, 2233
repellence, 2233
Pelochrista womonana,
Cylindrocopturus adspersus, 1281
Dectes texanus, 1281
host plant resistance, 1281
sunflower, 1281
Pentalonia nigronervosa, 493, 897
herbicide, 493
Musa sp., 897
Nanoviridae, 897
Nanoviridae, 493
persistent virus, 493
resistance, 897
Pentatomidae,
edge effect, 1515
fiber quality, 1515
integrated pest management, 1515
stink bugs, 1515
Peponapis,
Cucurbita, 563
irrigation, 563
sustainable agriculture, 563
tillage, 563
pepper, 287, 2183
biocontrol, 287
biological control, 2183
IPM, 287
Myzus persicae, 2183
Ostrinia nubilalis, 287
plant growth-promoting rhizobacteria, 2183
Trichogramma ostriniae, 287
pepper weevil,
artificial diet, 257
egg collection, 257
oviposition, 257
percentage of parasitism,
biological control, 1018
Bt transgenic cotton, 1018
life tables, 1018
temporal abundance, 1018
perimeter trap crops,
Acalymma vittatum, 1101
butternut squash, 1101
Cucurbita maxima, 1101
integrated pest management, 1101
permethrin,
Christmas trees, 69
pyrethroid insecticides, 69
tree shaking, 69
yellowjackets, 69
peroxidase,
catalase, 1262
esterase, 1262
lipoxygenase, 1262
lipoxygenase 1, 1262
Persea americana,
fruit fly, 1448
Hass cultivar, 1448
host status, 1448
persistent virus,
herbicide, 493
Nanoviridae, 493
Pentalonia nigronervosa, 493
pest,
bioenergy, 2154
biomass, 2154
Energy Independence and Security Act, 2154
ethanol, 2154
pest complex,
crop monitoring, 1336
error, 1336
imported cabbageworm, 1336
precision, 1336
pest control,
Arachnida, 1396
black widow spider, 1396
Latrodectus, 1396
urban entomology, 1396
pest management, 1170, 1567, 1791, 1846, 2198
antiaggregation pheromone, 1846
Dendroctonus brevicomis, 1846
efficacy, 1567
foraging activity, 1170
green peach aphid, 1567
greenhouse, 2198
horticulture, 2198

Linepithema humile, 1170
Mesolecanium fasciatum, 1170
Pinus ponderosa, 1846
potassium silicate, 2198
quality control, 1791
silicon, 2198
stand protection, 1846
sterile insect technique, 1791
sweetpotato whitefly B-biotype, 1567
Tephritidae, 1791
twospotted spider mite, 1567
pest monitoring,
Chilo suppressalis, 1094
mass trapping, 1094
mesoporous dispenser, 1094
pheromone, 1094
pest response,
foliar chemistry, 160
organic fertilizer, 160
Pieris rapae crucivora, 160
synthetic fertilizer, 160
pest resurgence,
dose response, 170
fertility table, 170
fitness, 170
natural enemy, 170
pesticide residues,
biological control, 905
conservation, 905
Diaprepes root weevil, 905
egg parasitoid, 905
pesticides, 616, 1591, 1737
glutathione S-transferase, 1591
Bombyx mori, *1591*
expression profile, 1591
honey bees, 616
imidacloprid, 616
insect virsues, 1591
LD_{50}, 1737
México, 1737
mortality bees, 616
seed-treated maize, 616
stingless bee, 1737
phenology, 692, 1607
Cry3Bb1, 1607
Diabrotica virgifera virgifera, 1607
integrated pest management, 692
resistance management, 1607
Vitis, 692
pheromone, 815, 1094, 1546
attract and kill, 815
attracticides, 815
Chilo suppressalis, 1094
lure and kill, 815
mass trapping, 1094
Megaplatypus mutatus, 1546
mesoporous dispenser, 1094
pest monitoring, 1094
semiochemicals, 815
(+)-sulcatol, 1546
sulcatone, 1546
trap design, 1546
pheromone dispensers,
Anomala orientalis, 659
Exomala, 659
Vaccinium corymbosum, 659
(Z)-7-tetradecen-2-one, 659
pheromone traps,
Anthonomus grandis, 183
boll weevil, 183
dichlorovos, 183
kill strip, 183
Phorodon humuli,
conservation biological control, 274
Humulus lupulus, 274
Podosphaera macularis, 274
predaceous mites, 274
photosynthesis, 412, 1960
chlorophyll content, 1960
cluster analysis, 1960
herbivory, 412
photosynthetic pigments, 412
plant resistance, 412
plant–insect interactions, 412
principal component analysis, 1960
stunt and necrosis ratings, 1960
photosynthetic pigments,
herbivory, 412
photosynthesis, 412
plant resistance, 412
plant–insect interactions, 412
Phthorimaea operculella,
clone, 1649
Columbia Basin, 1649
IPM, 1649
potato, 1649
Phtyoseiulus persimilis,
bifenazate, 336
control cost, 336
cost analysis, 336
Tetranychus urticae, 336
phylogenetics,
Elateridae, 743
secondary pest, 743
wireworm, 743
phylogeny,
A. m. carnica, 480
A. m. caucasica, 480
bee breeding, 480
genetic diversity, 480
Pierce's disease,
bacteria, 1743
glassy-winged sharpshooter, 1743
insect vector, 1743
leafhoppers, 1743
Pierce's disease, 1743
Pieris brassicae,
Insecta, 767
integrated pest management, 767
Mamestra brassicae, 767
Pieris rapae, 767
Pieris rapae crucivora,
foliar chemistry, 160
organic fertilizer, 160
pest response, 160
synthetic fertilizer, 160
Pieris rapae,
Insecta, 767
integrated pest management, 767
Mamestra brassicae, 767
Pieris brassicae, 767
Piezodorus guildinii,
Euschistus servus, 229
Glycine max, 229
Nezara viridula, 229
stink bug, 229
Pinus ponderosa, 1846, 2170
antiaggregation pheromone, 1846
Dendroctonus brevicomis, 1846, 2170
pest management, 1846
risk, 2170
stand density, 2170
stand protection, 1846
trapping, 2170
piperonyl butoxide,
Cimex lectularius, 2310
insecticide synergism, 2310
P450, 2310
pyrethroid resistance, 2310
Planococcus citri,
diagnostics, 8
PCR, 8
Planococcus minor, 8
restriction fragment length polymorphism, 8
Planococcus minor, 8, 1774
diagnostics, 8
ionizing radiation, 1774
PCR, 8
Planococcus citri, 8
quarantine, 1774
restriction fragment length polymorphism, 8
plant attractiveness,
cucumber, 2265
hardening, 2265
transplant, 2265
whitefly, 2265
plant extract,
growth inhibition, 2233
olive fruit fly, 2233
Peganum harmala, 2233
repellence, 2233
plant growth-promoting rhizobacteria,
biological control, 2183
Myzus persicae, 2183
pepper, 2183
plant population,
Ataxia hubbardi, 1044
Cylindrocopturus adspersus, 1044
lodging, 1044
soil moisture, 1044
plant protection,
Allium porum, 999
intercropping, 999
olfactometry, 999
Ophiomyia phaseoli, 999

plant resistance, 412, 774, 1291, 1624, 1954, 2350
antibiosis, 1291, 2350
biotype, 774, 1624, 1954
Diabrotica virgifera virgifera, 2350
Diuraphis noxia, 1954
electronic penetration graph, 1291
greenbug, 1624
herbivory, 412
Hessian fly, 774
maize, 2350
Mayetiola destructor, 774
photosynthesis, 412
photosynthetic pigments, 412
plant–insect interactions, 412
Russian wheat aphid, 1954
Schizaphis graminum, 1624
sorghum, 1624
tolerance index, 1291
wheat breeding, 774
plant stress,
citrus, 960
glassy-winged sharpshooter, 960
insect–plant interactions, 960
planting date,
density–yield relationship, 1536
economic injury level, 1536
Lissorhoptrus oryzophilus, 1536
Oryza sativa, 1536
plant–insect interactions,
herbivory, 412
photosynthesis, 412
photosynthetic pigments, 412
plant resistance, 412
plant–insect interactions, 412
Plodia interpunctella,
choice, 610
Habrobracon hebetor, 610
host instar, 610
parasitoid, 610
Plutella xylostella, 357, 2217
Bacillus thuringiensis, 2217
Cry toxins, 2217
demography, 357
diamondback moth, 2217
multigeneration, 357
spinosad, 357
sublethal effect, 357
Podosphaera macularis,
conservation biological control, 274
Humulus lupulus, 274
Phorodon humuli, 274
predaceous mites, 274
point mutation,
kdr, 2296
onion thrips, 2296
pyrethroid resistance, 2296
sodium channel, 2296
pollination,
degree-day, 2026
hornfaced bee, 2026
pollinators,
economic valuation, 467
factor of production, 467
yield enhancement, 467
polymerase chain reaction,
acaricide, 373
DNA melting temperature, 373
esterase, 373
sodium channel, 373
polymerase chain reaction-restriction fragment-length polymorphism, 401, 2209
Ceratitis, 401
Cydia pomonella, 2209
diagnostics, 2209
DNA barcode, 401
Grapholita spp., 2209
invasive, 401
pathway analysis, 401
species identification, 2209
poor host,
host status, 921
medfly, 921
nonhost, 921
quarantine pest, 921
Popillia japonica, 934, 1551, 2192
cultural control, 2192
essential oil, 1551
fecundity, 934
host plant resistance, 2192
IPM, 2192
semiochemicals, 1551
sex ratio, 934
soil ecology, 2192
trap, 934, 1551
trap efficacy, 934
population dynamics, 1369, 1377
cardboard refuges, 1377
insector probe traps, 1377
sampling, 1369
stored products, 1369, 1377
Populus,
aphid, 1070
proteinase inhibitor, 1070
reverse transcription-polymerase chain reaction, 1070
postharvest,
apple exportation, 43
microbial control, 43
quarantine treatments, 43
postharvest phytosanitary treatment,
invasive species, 1399
ionizing radiation, 1399
irradiation, 1399
quarantine pest, 1399
potassium silicate,
greenhouse, 2198
horticulture, 2198
pest management, 2198
silicon, 2198
potato, 422, 1032, 1649
chemical control, 1032
clone, 1649
Colorado potato beetle, 422
Columbia Basin, 1649
host resistance, 422
IPM, 1032, 1649
Phthorimaea operculella, 1649
Solanum, 422
wild species, 422
zebra chip disease, 1032
powder,
colocalization, 453
dissemination, 453
imaging, 453
Indianmeal moth, 453
precision,
crop monitoring, 1336
error, 1336
imported cabbageworm, 1336
pest complex, 1336
precision agriculture,
Diuraphis noxia, 533
satellite imagery, 533
spatial modeling, 533
topography, 533
predaceous mites,
conservation biological control, 274
Humulus lupulus, 274
Phorodon humuli, 274
Podosphaera macularis, 274
predators,
Adalia bipunctata, 1440
Chrysoperla carnea, 1440
entomopathogenic nematodes, 1440
laboratory bioassay, 1440
predatory behavior,
digestion, 500
Ephestia kuehniella, 500
nutrition, 500
thrips, 500
predatory Heteroptera,
arthropod diversity, 1116
insect–plant interactions, 1116
turfgrass, 1116
presence-absence sampling,
booklice, 1714
cardboard refuges, 1714
grain storages, 1714
numerical sampling, 1714
principal component analysis,
chlorophyll content, 1960
cluster analysis, 1960
photosynthesis, 1960
stunt and necrosis ratings, 1960
propagative transmission,
carrot purple leaf disease, 1417
citrus stubborn disease, 1417
leafhopper vectors, 1417
proportional plant dry weight change,
antibiosis, 1255
Diuraphis noxia, 1255
insect resistance categories, 1255
tolerance index, 1255
protein,
fat body, 1506
insecticides, 1506

Nilaparvata lugens, 1506
ovary, 1506
proteinase inhibitor, 1070, 2343
Achaea janata, 2343
aphid, 1070
Cajanus cajan, 2343
midgut trypsin-like proteinases, 2343
Populus, 1070
reverse transcription-polymerase chain reaction, 1070
Spodoptera litura, 2343
Pseudoplusia includens, 1497, 1640
Anticarsia gemmatalis, 1640
Bacillus thuringiensis, 1497, 1640
Cry1Ac, 1497
Cry1F, 1497
resistance management, 1640
Spodoptera exigua, 1497
Spodoptera frugiperda, 1497
transgenic soybean, 1640
psyllid,
citrus greening disease, 446
huanglongbing, 446
public policy,
economics, 1
integrated pest management, 1
push-pull strategy,
bark beetles, 79
fumigation, 79
quarantine pest, 79
wood borers, 79
pyrethrins,
Acrosternum hilare, 1915
azadirachtin, 1915
Euschistus servus, 1915
spinosad, 1915
pyrethroid insecticides,
Christmas trees, 69
permethrin, 69
tree shaking, 69
yellowjackets, 69
pyrethroid resistance, 1928, 2296, 2310
Benin Republic, 1928
Cimex lectularius, 2310
cotton, 1928
Helicoverpa armigera, 1928
insecticide synergism, 2310
kdr, 2296
onion thrips, 2296
P450, 2310
piperonyl butoxide, 2310
point mutation, 2296
resistance stability, 1928
sodium channel, 2296
pyrethroids, 388, 2126, 2241, 2289
cabbage crowngall fly, 2241
cabbage gall midge, 2241
Contarinia nasturtii, 2241
corn earworm, 2289
insecticide resistance, 2289
L. maculicollis, 388
neonicotinoids, 2126, 2241
resistance, 388
seed treatments, 2126
wheat, 2126
wireworms, 2126

Q

quality control,
pest management, 1791
sterile insect technique, 1791
Tephritidae, 1791
quarantine, 64, 522, 913, 1239, 1774
Bambusa, 913
Ceratitis capitata, 1239
Chlorophorus, 913
commodity treatment, 64
disinfestations, 64
fruit fly, 522
fumigation, 913
heat treatments, 522
heating block system, 522
ionizing radiation, 1774
irradiation, 64
LAMP, 1239
methyl bromide, 913
molecular identification, 1239
Ostrinia nubilalis, 64
Planococcus minor, 1774
thermal death, 522
quarantine pest, 79, 921, 1399
bark beetles, 79
fumigation, 79
host status, 921
invasive species, 1399
ionizing radiation, 1399
irradiation, 1399
medfly, 921
nonhost, 921
poor host, 921
postharvest phytosanitary treatment, 1399
push-pull strategy, 79
wood borers, 79
quarantine treatments,
apple exportation, 43
microbial control, 43
postharvest, 43

R

radar observations,
flight behavior, 95
Helicoverpa armigera, 95
light trapping, 95
migration, 95
rainfastness,
GF-120, 1108
paraffin wax emulsion, 1108
spinosad, 1108
Rdl,
cat flea, 366
Ctenocephalides felis, 366
fipronil, 366
insecticide resistance, 366
real-time PCR,
detection, 1691
stored-product pests, 1691
Tribolium confusum, 1691
receiver operating characteristic curve,
area under the receiver operating characteristic curve, 1985
Ceratitis capitata, 1985
clustered data, 1985
oviposition distribution, 1985
reduced-risk insecticides,
biopesticides, 304
essential oils, 304
repellence,
growth inhibition, 2233
olive fruit fly, 2233
Peganum harmala, 2233
plant extract, 2233
repellency,
attraction, 2056
kinesis, 2056
locomotor initiator, 2056
taxis, 2056
reproductive behavior,
insect resistance management, 2096
mating behavior, 2096
resampling software,
decision probability matrix, 1874
parameter selection, 1874
Trichoplusia ni, 1874
resampling validation,
binomial sequential sampling, 1325
Listronotus maculicollis, 1325
turfgrass, 1325
residue profile, 1864, 1884
bioassay, 1864
curative activity, 1884
insect growth regulator, 1864
neonicotinoid, 1864, 1884
organophosphate, 1864, 1884
Rhagoletis pomonella, 1884
resistance, 13, 388, 897, 1654, 2301
Aethina tumida, 13
antibiosis, 1654
Bacillus thuringiensis, 2301
bollworm, 2301
cotton, 2301
Diuraphis noxia, 1654
entrance reducer, 13
inheritance, 1654
L. maculicollis, 388
Musa sp., 897
Nanoviridae, 897
Pentalonia nigronervosa, 897
pyrethroids, 388
small hive beetle, 13
transgenic crops, 2301
wheat, 1654
resistance categories,
host plant resistance, 1628
Orseolia oryzae, 1628
Oryza sativa, 1628
resistance management, 717, 1607, 1640
Anticarsia gemmatalis, 1640
Bacillus thuringiensis, 1640
Bt crops, 717

Cry3Bb1, 1607
Diabrotica virgifera virgifera, 1607
high-dose/refuge strategy, 717
mathematical modeling, 717
phenology, 1607
Pseudoplusia includens, 1640
RIDL, 717
transgenic soybean, 1640
resistance stability,
Benin Republic, 1928
cotton, 1928
Helicoverpa armigera, 1928
pyrethroids resistance, 1928
restriction fragment length polymorphism,
diagnostics, 8
PCR, 8
Planococcus citri, 8
Planococcus minor, 8
Reticulitermes,
fipronil, 347
internalization, 347
toxicity, 347
transfer, 347
Reticulitermes flavipes,
bioavailability, 1922
termites, 1922
termiticide, 1922
toxicity, 1922
reverse transcription-polymerase chain reaction,
aphid, 1070
Populus, 1070
proteinase inhibitor, 1070
Rhagoletis indifferens,
biofumigant, 2041
emergence delay, 2041
sublethal effects, 2041
volatile organic compounds, 2041
Rhagoletis pomonella,
curative activity, 1884
neonicotinoid, 1884
organophosphate, 1884
residue profile, 1884
Rhynchophorus ferrugineus,
automatic detection, 1681
automatic recognition, 1681
bioacoustics, 1681
Sitophilus oryzae, 1681
Rhyzopertha dominica,
Cryptolestes ferrugineus, 1696
sampling, 1696
stored grain, 1696
Tribolium castaneum, 1696
rice, 1663, 1837
barley, 1663
Hessian fly, 1663
host plant resistance, 1663
Lissorhoptrus oryzophilus, 1837
rice water weevil, 1837
seeding rate, 1837
wheat, 1663
yield loss, 1837
rice water weevil,
Lissorhoptrus oryzophilus, 1837
rice, 1837
seeding rate, 1837
yield loss, 1837
RIDL,
Bt crops, 717
high-dose/refuge strategy, 717
mathematical modeling, 717
resistance management, 717
risk,
Dendroctonus brevicomis, 2170
Pinus ponderosa, 2170
stand density, 2170
trapping, 2170
risk assessment,
Abgrallaspis aguacatae, 855
crawlers, 855
Diaspididae, 855
invasive pests, 855
root maggots,
canola, 219
Delia spp., 219
intercropping, 219
oilseed rape, 219
root-knot nematode,
above ground, 602
below ground, 602
European corn borer, 602
herbivory, 602
Rosa hybrida,
biological control, 1896
floriculture, 1896
integrated pest management, 1896
Tetranychus urticae, 1896
Russian honey bees,
Apis, 1233
breeding program, 1233
genetic differentiation, 1233
Russian wheat aphid,
biotype, 1954
Diuraphis noxia, 1954
plant resistance, 1954

S

s-methoprene,
Bacillus thuringiensis variety *israelensis*, 507
catch-trays, 507
distribution pattern, 507
helicopter, 507
sample size,
tally threshold, 1344
Acrosternum hilare, 1344
Euschistus servus, 1344
Nezara viridula, 1344
sampling, 1369, 1696
Cryptolestes ferrugineus, 1696
population dynamics, 1369
Rhyzopertha dominica, 1696
stored grain, 1696
stored products, 1369
Tribolium castaneum, 1696
sampling efficiency,
beat cloth, 2360
sweep net, 2360
Taylor's power law, 2360
satellite imagery,
Diuraphis noxia, 533
precision agriculture, 533
spatial modeling, 533
topography, 533
Satsuma mandarin,
developmental biology, 1908
host preference, 1908
Leptoglossus zonatus, 1908
scanning electron microscopy,
electroantennography, 974
leafhopper, 974
olfactometry, 974
Vitis, 974
Scarabaeidae,
Bacillus thuringiensis serovar *japonensis*, 1891
Northern masked chafer, 1891
oriental beetle, 1891
Schizaphis graminum,
biotype, 1624
greenbug, 1624
plant resistance, 1624
sorghum, 1624
Scolytidae,
Cerambycidae, 1075
Curculionidae, 1075
heat treatment, 1075
Scolytinae, 1075
Scolytinae,
Cerambycidae, 1075
Curculionidae, 1075
heat treatment, 1075
Scolytidae, 1075
Scrophularia ningpoensis,
biology, 1039
developmental period, 1039
survival rate, 1039
temperature, 1039
seasonal phenology,
billbugs, 309
developmental time, 309
Sphenophorus venatus vestitus, 309
turfgrass, 309
secondary pest,
Elateridae, 743
phylogenetics, 743
wireworm, 743
seed coating,
guttation, 1808
honey bee, 1808
neonicotinoid, 1808
seed rot,
bacterial opportunist, 36
cotton bolls, 36
stink bugs, 36
vector, 36
seed treatment, 187, 2126
Glycine max, 187
imidacloprid, 187
neonicotinoids, 2126
pyrethroids, 2126
thiamethoxam, 187
wheat, 2126
wireworms, 2126
seed-treated maize,
honey bees, 616
imidacloprid, 616
mortality bees, 616
pesticides, 616

seeding rate,
Lissorhoptrus oryzophilus, 1837
rice, 1837
rice water weevil, 1837
yield loss, 1837
semiochemicals, 815, 1009, 1468, 1551
attract and kill, 815
attractant, 1009
attracticides, 815
essential oil, 1551
host preference, 1009
lure and kill, 815
onion thrips, 1468
pheromones, 815
Popillia japonica, 1551
Thrips obscuratus, 1468
Thrips tabaci, 1468
trap, 1551
trap crops, 1009
(Z)-3-hexenyl acetate, 1009
Sesiidae,
antagonist-based mating disruption, 1085
apple, 1085
dogwood borer, 1085
mass trapping, 1085
sex attractant pheromone,
Cydia pomonella, 315
Grapholita molesta, 315
Isomate, 315
mating disruption, 315
sex ratio,
fecundity, 934
Popillia japonica, 934
trap efficacy, 934
traps, 934
shape,
color, 954
host odor, 954
size, 954
tephritids, 954
silage,
corn, 2146
economic injury level, 2146
European corn borer, 2146
Ostrinia nubilalis, 2146
silicon,
greenhouse, 2198
horticulture, 2198
pest management, 2198
potassium silicate, 2198
silverleaf whitefly, 670, 1482
Bemisia argentifolii, 670
Bemisia tabaci, 1482
microsatellite markers, 670
mitochondrial cytochrome oxidase I subunit, 670
tomato yellow leaf curl virus, 1482
TYLCV, 1482
simulation modeling,
biological control, 1224
fitness cost, 1224
immune response, 1224
integrated resistance management, 1224
single-pair families,
Bt-resistance allele frequency, 381
F_2 screen, 381
Heliothis virescens, 381
insecticide resistance management, 381
single-tree protection,
Dendroctonus frontalis, 1062
emamectin benzoate, 1062
fipronil, 1062
Ips spp., 1062
Sitophilus oryzae,
automatic detection, 1681
automatic recognition, 1681
bioacoustics, 1681
Rhynchophorus ferrugineus, 1681
size,
color, 954
host odor, 954
shape, 954
tephritids, 954
small hive beetle,
Aethina tumida, 13
entrance reducer, 13
resistance, 13
social insect,
communication, 121
Coptotermes, 121
vibration, 121
sodium channel, 373, 2296
acaricide, 373
DNA melting temperature, 373
esterase, 373
kdr, 2296
onion thrips, 2296
point mutation, 2296
polymerase chain reaction, 373
pyrethroid resistance, 2296
soft scale,
citrus, 296
coverage, 296
integrated pest management, 296
spray effectiveness, 296
soil ecology,
cultural control, 2192
host plant resistance, 2192
IPM, 2192
Popillia japonica, 2192
soil insecticides,
Bactrocera, 139
Ceratitis, 139
Force, 139
Warrior, 139
soil moisture,
Ataxia hubbardi, 1044
Cylindrocopturus adspersus, 1044
lodging, 1044
plant population, 1044
Solanum,
Colorado potato beetle, 422
host resistance, 422
potato, 422
wild species, 422
Solanum tuberosum,
host plant resistance, 1270
Leptinotarsa decimlineata, 1270
transformation, 1270
Solbait,
GF-120, 1157
Mexican fruit fly, 1157
Solenopsis invicta, 1054, 1393
Diatraea saccharalis, 1054
digging dynamics, 1393
excavated volume, 1393
natural enemies, 1054
sugarcane integrated pest management, 1054
sorghum,
biotype, 1624
greenbug, 1624
plant resistance, 1624
Schizaphis graminum, 1624
southeastern Europe,
aphid parasitoids, 836
crop habitats, 836
noncrop habitats, 836
tritrophic interactions, 836
southern chinch bug,
Captiva, 432
host plant resistance, 432
leaf sheath anatomy, 432
lignification, 432
soybean aphid, 1389, 2116
Aphis glycines, 1389
cross-species amplification, 1389
economic surplus, 2116
impact assessment, 2116
IPM, 2116
microsatellites, 1389
Soyscreen,
Beauveria bassiana, 1759
formulation, 1759
UV screen, 1759
spatial modeling, 50, 533
Diuraphis noxia, 533
genetic control, 50
precision agriculture, 533
satellite imagery, 533
sterile insect technique, 50
topography, 533
species identification,
Cydia pomonella, 2209
diagnostics, 2209
Grapholita spp., 2209
polymerase chain reaction-restriction fragment-length polymorphism, 2209
species-specific multiplex-polymerase chain reaction,
armored scale insects, 1948
avocado, 1948
Diaspididae, 1948
internal transcriber spacer 2, 1948
spectral sensitivity,
electroretinogram, 2160
emerald ash borer, 2160
insect trap color, 2160

Sphenophorus venatus vestitus,
billbugs, 309
developmental time, 309
seasonal phenology, 309
turfgrass, 309
spider mite,
life table, 595
Tetranychus urticae, 595
spinosad, 357, 552, 646, 1108, 1472, 1915
acetamiprid, 646
Acrosternum hilare, 1915
Apis mellifera, 1472
azadirachtin, 1915
B. cucurbitae, 552
Bactrocera dorsalis, 552
chlorfenapyr, 646
demography, 357
Euschistus servus, 1915
GF-120, 1108, 1472
honey bee, 1472
multigeneration, 357
naled, 552
paraffin wax emulsion, 1108
Plutella xylostella, 357
pyrethrins, 1915
rainfastness, 1108
sublethal effect, 357
Tephritid flies, 552
Tephritidae, 1472
thiamethoxam, 646
spittlebugs,
adult damage, 1309
Brachiaria, 1309
host plant resistance, 1309
SPME,
(8*E*,10*E*)-tetradecadien-1-ol, 574
(8*E*,10*E*)-tetradecadien-1-yl acetate, 574
(8*E*,10*E*)-tetradecadien-1-yl formate, 574
(8*E*,10*E*)-tetradecadienal, 574
Spodoptera exigua, 1497, 1767
Bacillus thuringiensis, 1497
cocoa, 1767
coffee, 1767
Cry1Ac, 1497
Cry1F, 1497
nucleopolyhedrovirus, 1767
Pseudoplusia includens, 1497
Spodoptera frugiperda, 1497
UV radiation, 1767
Spodoptera frugiperda, 210, 1151, 1497
Bacillus thuringiensis, 1497
corn, 210
cotton, 210
Cry1Ac, 1497
Cry1F, 1497
Geocoris punctipes, 1151
Geocoris uliginosus, 1151
migration, 210
Orius insidiosus, 1151
Pseudoplusia includens, 1497
Spodoptera exigua, 1497
turfgrass, 1151
Spodoptera littoralis,
development, 1490
fecundity, 1490
fertility, 1490
insect growth regulators, 1490
Spodoptera litura,
Achaea janata, 2343
Cajanus cajan, 2343
midgut trypsin-like proteinases, 2343
proteinase inhibitor, 2343
Spondias mombin,
attractants, 2072
monitoring, 2072
volatiles, 2072
West Indian fruit fly, 2072
spray effectiveness,
citrus, 296
coverage, 296
integrated pest management, 296
soft scale, 296
square retention,
economic injury level, 2109
Gossypium hirsutum, 2109
Lygus lineolaris, 2109
stable fly,
colonization, 788
dairy farms, 788
dispersal, 788
Muscidae, 788
stable isotopes,
^{13}C, 941
mass rearing, 941
Mediterranean fruit flies, 941
sterile insect technique, 941
stand density,
Dendroctonus brevicomis, 2170
Pinus ponderosa, 2170
risk, 2170
trapping, 2170
stand protection,
antiaggregation pheromone, 1846
Dendroctonus brevicomis, 1846
pest management, 1846
Pinus ponderosa, 1846
Stenoma catenifer,
detection, 1460
invasive species, 1460
(6Z,9Z)-tricosadiene, 1460
(9Z)-9,13-tetradecadien-11-ynal, 1460
sterile insect technique, 50, 542, 941, 1791
Anastrepha obliqua, 542
^{13}C, 941
demographic changes, 542
genetic control, 50
laboratory colonization, 542
mass rearing, 542, 941
Mediterranean fruit flies, 941
pest management, 1791
quality control, 1791
spatial modeling, 50
stable isotopes, 941
Tephritidae, 1791
stigmasterol,
Cacalia tangutica, 1444
cytotoxicity, 1444
friedelin, 1444
insecticidal activity, 1444
stingless bee,
LD_{50}, 1737
México, 1737
pesticide, 1737
stink bug, 36, 229, 1133, 1515
bacterial opportunist, 36
blacklight trap, 1133
cotton bolls, 36
critical fruit damage stage, 1133
edge effect, 1515
Euschistus servus, 229
fiber quality, 1515
Glycine max, 229
integrated pest management, 1515
invasive species, 1133
Nezara viridula, 229
Pentatomidae, 1515
Piezodorus guildinii, 229
seed rot, 36
vector, 36
stomatal conductance,
net CO_2 assimilation, 1141
Diaprepes abbreviatus, *1141*
internal CO_2 concentration, 1141
transpiration, 1141
stored grain,
Cryptolestes ferrugineus, 1696
Rhyzopertha dominica, 1696
sampling, 1696
Tribolium castaneum, 1696
stored products, 1360, 1369, 1377, 1705
cardboard refuges, 1377
development, 1705
development rates, 1360
grain, 1360
insector probe traps, 1377
life history, 1360
life table, 1705
Liposcelis paeta, 1705
population dynamics, 1369, 1377
sampling, 1369
temperature, 1705
stored-product pests, 1352, 1691
abamectin, 1352
detection, 1691
maize, 1352
real-time PCR, 1691
temperature, 1352
Tribolium confusum, 1691
wheat, 1352
striped cucumber beetle,
bioassay, 2255
cucurbit, 2255
imidacloprid, 2255
stunt and necrosis ratings,
chlorophyll content, 1960
cluster analysis, 1960
photosynthesis, 1960

principal component analysis, 1960
sublethal effect, 357, 2041, 2078
biofumigant, 2041
demography, 357
emergence delay, 2041
inhibition of egg hatch, 2078
Leptinotarsa decemlineata, 2078
multigeneration, 357
novaluron, 2078
Plutella xylostella, 357
Rhagoletis indifferens, 2041
spinosad, 357
volatile organic compounds, 2041
sugarcane integrated pest management,
Diatraea saccharalis, 1054
natural enemies, 1054
Solenopsis invicta, 1054
(+)-sulcatol,
Megaplatypus mutatus, 1546
pheromone, 1546
sulcatone, 1546
trap design, 1546
sulcatone,
Megaplatypus mutatus, 1546
pheromone, 1546
(+)-sulcatol, 1546
trap design, 1546
sulfur,
Galandromus occidentalis, 324
lime sulfur, 324
Panonychus ulmi, 324
Tetranychus urticae, 324
sunflower,
Cylindrocopturus adspersus, 1281
Dectes texanus, 1281
host plant resistance, 1281
Pelochrista womonana, 1281
superoxide dismutase,
G. mellonella, 152
glutathione, 152
malathion, 152
malondialdehyde, 152
survival, 629, 1750
compatibility, 1750
Cryptomeria japonica, 629
Dalotia, 1750
Epinotia granitalis, 629, 629
fungicides, 1750
insecticides, 1750
survival rate,
biology, 1039
developmental period, 1039
Scrophularia ningpoensis, 1039
temperature, 1039
sustainable agriculture,
Cucurbita, 563
irrigation, 563
Peponapis, 563
tillage, 563
swede midge,
Brassicaceae, 115
Contarinia nasturtii, 115
weed, 115
sweep net,
beat cloth, 2360
sampling efficiency, 2360
Taylor's power law, 2360
sweetpotato whitefly B-biotype,
efficacy, 1567
green peach aphid, 1567
pest management, 1567
twospotted spider mite, 1567
synergism,
Frankliniella occidentalis, 393
insecticide mixtures, 393
insecticide resistance, 393
Thysanoptera, 393
synergists,
carboxyl-esterases, 1203
cytochrome P450, 1203
glutathione *S*-transferase, 1203
synthetic fertilizer,
foliar chemistry, 160
organic fertilizer, 160
pest response, 160
Pieris rapae crucivora, 160

T

tally threshold,
Acrosternum hilare, 1344
Euschistus servus, 1344
Nezara viridula, 1344
sample size, 1344
tarnished plant bug,
acephate, 699
insecticide resistance, 699
Lygus lineolaris, 699
tau-fluvalinate,
colony collapse disorder, 474
coumaphos, 474
cytochrome P450 monooxygenase, 474
Varroa destructor, 474
taxis,
attraction, 2056
kinesis, 2056
locomotor initiator, 2056
repellency, 2056
Taylor's power law,
beat cloth, 2360
sampling efficiency, 2360
sweep net, 2360
Taylor's power law, 2360
temperature, 1039, 1352, 1705, 1992
abamectin, 1352
biology, 1039
development, 1705
developmental period, 1039
life table, 1705
Liposcelis paeta, 1705
maize, 1352
methoprene, 1992
P. interpunctella, 1992
packaging materials, 1992
Scrophularia ningpoensis, 1039
stored product, 1705
stored-product pests, 1352
survival rate, 1039
wheat, 1352
temperature-dependent toxicity,
citrus, 685
citrus greening disease, 685
Diaphorina citri, 685
huanglongbing, 685
temporal abundance,
biological control, 1018
Bt transgenic cotton, 1018
life tables, 1018
percentage of parasitism, 1018
Tephritid flies,
B. cucurbitae, 552
Bactrocera dorsalis, 552
naled, 552
spinosad, 552
Tephritidae, 86, 1472, 1791, 2268
A. obliqua, 2268
Anastrepha, 86
Anastrepha ludens, 2268
Apis mellifera, 1472
baits, 86
behavior, 86
fruit fly management, 2268
GF-120, 1472
honey bee, 1472
host marking pheromones, 2268
pest management, 1791
quality control, 1791
Spinosad, 1472
sterile insect technique, 1791
trap design, 86
tephritids,
color, 954
host odor, 954
shape, 954
size, 954
termite control,
attractant, 1175
foraging behavior, 1175
tunneling, 1175
termites,
bioavailability, 1922
Reticulitermes flavipes, 1922
termiticide, 1922
toxicity, 1922
termiticide,
bioavailability, 1922
Reticulitermes flavipes, 1922
termites, 1922
toxicity, 1922
Tetranychus urticae, 324, 336, 595, 1896, 2084
bifenazate, 336
bioassays, 2084
biological control, 1896
control cost, 336
cost analysis, 336
floriculture, 1896
Galandromus occidentalis, 324
integrated pest management, 1896
laboratory method, 2084
lethal concentration, 2084
life table, 595
lime sulfur, 324
Panonychus ulmi, 324
Phtyoseiulus persimilis, 336

Rosa hybrida, 1896
spider mite, 595
sulfur, 324
thermal death,
fruit fly, 522
heat treatments, 522
heating block system, 522
quarantine, 522
thermotolerance,
heat sterilization, 2048
wood borers, 2048
thiamethoxam, 187, 646
acetamiprid, 646
chlorfenapyr, 646
Glycine max, 187
imidacloprid, 187
seed treatment, 187
spinosad, 646
thiophanate-methyl,
cotton, 887
Frankliniella tritici, 887
Fusarium hardlock, 887
lambda-cyhalothrin, 887
three-hypothesis testing,
Bartlett's sequential hypothesis test, 1970
Iwao's method, 1970
Wald's sequential hypothesis test, 1970
thrips,
digestion, 500
Ephestia kuehniella, 500
nutrition, 500
predatory behavior, 500
Thrips obscuratus,
onion thrips, 1468
semiochemicals, 1468
Thrips tabaci, 1468
Thrips tabaci,
onion thrips, 1468
semiochemicals, 1468
Thrips obscuratus, 1468
Thyridopteryx ephemeraeformis,
arborvitae, 1164
bagworm, 1164
translaminar, 1164
urban entomology, 1164
Thysanoptera,
Frankliniella occidentalis, 393
insecticide mixtures, 393
insecticide resistance, 393
synergism, 393
tick control,
Amblyomma americanum, 2316
carvacrol, 2316
Ixodes scapularis, 2316
nootkatone, 2316
tillage,
Cucurbita, 563
irrigation, 563
Peponapis, 563
sustainable agriculture, 563
Tipula oleracea,
crane flies, 652
golf courses, 652
invasive insects, 652
Tipula paludosa, 652
Tipula paludosa,
crane flies, 652
golf courses, 652
invasive insects, 652
Tipula oleracea, 652
tobacco budworm,
Cry1Ac-susceptibility, 1599
insect artificial diet comparison, 1599
larval growth, 1599
tobacco thrips,
age-related resistance, 30
Capsicum annuum, 30
tolerance,
antibiosis, 1801
antixenosis, 1801
Delphacodes kuscheli, 1801
wheat, 1801
tolerance index, 1255, 1291
antibiosis, 1255, 1291
Diuraphis noxia, 1255
electronic penetration graph, 1291
insect resistance categories, 1255
plant resistance, 1291
proportional plant dry weight change, 1255
tomato yellow leaf curl virus,
Bemisia tabaci, 1482
silverleaf whitefly, 1482
TYLCV, 1482
topical application,
esterase bioassay, 1209
Glycine max, 1209
neonicotinoid, 1209
Neotropical brown stink bug, 1209
topography,
Diuraphis noxia, 533
precision agriculture, 533
satellite imagery, 533
spatial modeling, 533
Tortricidae,
barcodes, 2333
internal transcribed spacer, 2333
nested polymerase chain reaction, 2333
toxicity, 20, 347, 1423, 1922
almond, 20
B. thuringiensis subsp. *israelensis*, 1423
Bacillus sphaericus, 1423
bioavailability, 1922
Captan, 20
chicken feathers, 1423
deoiled rice bran, 1423
fipronil, 347
fungicide, 20
honey bee, 20
internalization, 347
Reticulitermes, 347
Reticulitermes flavipes, 1922
termites, 1922
termiticide, 1922
transfer, 347
trans-anethole,
essential oil, 203
estragole, 203
fruit fly, 203
linalool, 203
transfer,
fipronil, 347
internalization, 347
Reticulitermes, 347
toxicity, 347
transformation,
host plant resistance, 1270
Leptinotarsa decimlineata, 1270
Solanum tuberosum, 1270
transgenic,
behavioral resistance, 781
dispersal, 781
feeding, 781
insect resistance management, 781
transgenic cotton,
Cry protein, 1301
enzyme-linked immunosorbent assay, 1301
WideStrike, 1301
transgenic crops,
Bacillus thuringiensis, 2301
bollworm, 2301
cotton, 2301
resistance, 2301
transgenic soybean,
Anticarsia gemmatalis, 1640
Bacillus thuringiensis, 1640
Pseudoplusia includens, 1640
resistance management, 1640
translaminar,
arborvitae, 1164
bagworm, 1164
Thyridopteryx ephemeraeformis, 1164
urban entomology, 1164
transpiration,
net CO_2 assimilation, 1141
Diaprepes abbreviatus, *1141*
internal CO_2 concentration, 1141
stomatal conductance, 1141
transplant,
cucumber, 2265
hardening, 2265
plant attractiveness, 2265
whitefly, 2265
trap, 934, 1551, 1580
Cimex *lectularius*, 1580
essential oil, 1551
fecundity, 934
lure, 1580
monitoring, 1580
Popillia japonica, 934, 1551
semiochemicals, 1551
sex ratio, 934
trap efficacy, 934
trap crop, 1009, 2137
attractant, 1009
Cephus cinctus, 2137
cultivar blend, 2137
host preference, 1009

semiochemicals, 1009
wheat, 2137
wheat stem sawfly, 2137
(Z)-3-hexenyl acetate, 1009
trap design, 86, 1546
Anastrepha, 86
baits, 86
behavior, 86
Megaplatypus mutatus, 1546
pheromone, 1546
(+)-sulcatol, 1546
sulcatone, 1546
Tephritidae, 86
trap efficacy,
fecundity, 934
Popillia japonica, 934
sex ratio, 934
traps, 934
trapping, 1123, 2170
Dendroctonus brevicomis, 2170
Fopius arisanus, 1123
GF-120 NF Naturalyte Fruit Fly Bait, 1123
infestation, 1123
integrated pest management, 1123
Pinus ponderosa, 2170
risk, 2170
stand density, 2170
tree nuts,
codling moth, 2003
Indianmeal moth, 2003
navel orangeworm, 2003
vacuum treatment, 2003
tree shaking,
Christmas trees, 69
permethrin, 69
pyrethroid insecticides, 69
yellowjackets, 69
Tribolium castaneum,
Cryptolestes ferrugineus, 1696
Rhyzopertha dominica, 1696
sampling, 1696
stored grain, 1696
Tribolium confusum,
detection, 1691
real-time PCR, 1691
stored-product pests, 1691
Trichogramma ostriniae,
biocontrol, 287
IPM, 287
Ostrinia nubilalis, 287
pepper, 287
Trichoplusia ni,
decision probability matrix, 1874
parameter selection, 1874
resampling software, 1874
tritrophic interactions,
aphid parasitoids, 836
crop habitats, 836
noncrop habitats, 836
southeastern Europe, 836
tunneling,
attractant, 1175
foraging behavior, 1175
termite control, 1175
turfgrass, 309, 1116, 1151, 1325
arthropod diversity, 1116
billbugs, 309
binomial sequential sampling, 1325
developmental time, 309
Geocoris punctipes, 1151
Geocoris uliginosus, 1151
insect–plant interactions, 1116
Listronotus maculicollis, 1325
Orius insidiosus, 1151
predatory Heteroptera, 1116
resampling validation, 1325
seasonal phenology, 309
Sphenophorus venatus vestitus, 309
Spodoptera frugiperda, 1151
tussock moth,
developmental rate, 637
growing degree-days, 637
twospotted spider mite,
efficacy, 1567
green peach aphid, 1567
pest management, 1567
sweetpotato whitefly B-biotype, 1567
TYLCV,
Bemisia tabaci, 1482
silverleaf whitefly, 1482
tomato yellow leaf curl virus, 1482

U

urban entomology, 1164, 1396
Arachnida, 1396
arborvitae, 1164
bagworm, 1164
black widow spider, 1396
Latrodectus, 1396
pest control, 1396
Thyridopteryx ephemeraeformis, 1164
translaminar, 1164
UV,
Ceratothripoides claratris, 1559
greenhouses, 1559
immigration, 1559
insect vision, 1559
UV radiation,
cocoa, 1767
coffee, 1767
nucleopolyhedrovirus, 1767
Spodoptera exigua, 1767
UV screen,
Beauveria bassiana, 1759
formulation, 1759
Soyscreen, 1759

V

Vaccinium corymbosum,
Anomala orientalis, 659
Exomala, 659
pheromone dispensers, 659
(Z)-7-tetradecen-2-one, 659
Vaccinium spp.,
Mediterranean fruit fly, 1859
melon fly, 1859
nonhost, 1859
oriental fruit fly, 1859
vacuum treatment,
codling moth, 2003
Indianmeal moth, 2003
navel orangeworm, 2003
tree nuts, 2003
Varroa destructor, 474, 485, 2033
Apis mellifera, 485
colony collapse disorder, 474
coumaphos, 474
cytochrome P450 monooxygenase, 474
drone-brood trapping, 2033
honey bee, 2033
hygienic behavior, 485
IPM, 2033
Nosema spp., 485
tau-fluvalinate, 474
vector,
bacterial opportunist, 36
cotton bolls, 36
seed rot, 36
stink bugs, 36
vibration,
communication, 121
Coptotermes, 121
social insect, 121
visual cues,
adult orientation, 127
Coccinia grandis, 127
Melittia oedipus, 127
olfactory cues, 127
Vitis, 692, 974
electroantennography, 974
integrated pest management, 692
leafhopper, 974
olfactometry, 974
phenology, 692
scanning electron microscopy, 974
volatile organic compounds,
biofumigant, 2041
emergence delay, 2041
Rhagoletis indifferens, 2041
sublethal effects, 2041
volatiles,
attractants, 2072
monitoring, 2072
Spondias mombin, 2072
West Indian fruit fly, 2072

W

Wald's sequential hypothesis test,
Bartlett's sequential hypothesis test, 1970
Iwao's method, 1970
three-hypothesis testing, 1970
Wald's sequential hypothesis test, 1970
Warrior,
Bactrocera, 139
Ceratitis, 139
Force, 139
soil insecticides, 139

weed,
Brassicaceae, 115
Contarinia nasturtii, 115
swede midge, 115
West Indian fruit fly,
attractants, 2072
monitoring, 2072
Spondias mombin, 2072
volatiles, 2072
western corn rootworm,
Diabrotica virgifera virgifera, 1317
heterosis, 1317
native plant resistance, 1317
wheat, 1352, 1654, 1663, 1801, 2126, 2137
abamectin, 1352
antibiosis, 1654, 1801
antixenosis, 1801
barley, 1663
Cephus cinctus, 2137
cultivar blend, 2137
Delphacodes kuscheli, 1801
Diuraphis noxia, 1654
Hessian fly, 1663
host plant resistance, 1663
inheritance, 1654
maize, 1352
neonicotinoids, 2126
pyrethroids, 2126
resistance, 1654
rice, 1663
seed treatments, 2126
stored-product pests, 1352
temperature, 1352
tolerance, 1801
trap crop, 2137
wheat stem sawfly, 2137
wireworms, 2126
wheat breeding,
biotype, 774
Hessian fly, 774
Mayetiola destructor, 774
plant resistance, 774
wheat stem sawfly,
Cephus cinctus, 2137
cultivar blend, 2137
trap crop, 2137
wheat, 2137
whitefly, 750, 2265
Bemisia tabaci, 750
cucumber, 2265
cytochrome oxidase I, 750
hardening, 2265
mitochondria, 750
plant attractiveness, 2265
transplant, 2265
whorl-stage corn,
Bacillus thuringiensis, 624
European corn borer, 624
evaluation technique, 624
model, 624
WideStrike,
Cry protein, 1301
enzyme-linked immunosorbent assay, 1301
transgenic cotton, 1301
wild species,
Colorado potato beetle, 422
host resistance, 422
potato, 422
Solanum, 422
wildland–urban interface,
exurban forest, 237
freight analysis framework, 237
invasive species, 237
nonindigenous species, 237
wildland–urban interface, 237
wind tunnel,
aggregation pheromone, 992
arrestment, 992
Diaprepes root weevil, 992
winter fumigation,
formic acid, 1729
honey bee mite, 1729
Nosema apis, 1729
Nosema ceranae, 1729
wintergreen oil,
Chaetodactylus krombeini, 2090
essential oil, 2090
formic acid, 2090
Osmia cornifrons, 2090
wireworm, 743, 2126
Elateridae, 743
neonicotinoids, 2126
phylogenetics, 743
pyrethroids, 2126
secondary pest, 743
seed treatments, 2126
wheat, 2126
wood borers, 79, 2048
bark beetles, 79
fumigation, 79
heat sterilization, 2048
push-pull strategy, 79
quarantine pest, 79
thermotolerance, 2048

Y

yellowjackets,
Christmas trees, 69
permethrin, 69
pyrethroid insecticides, 69
tree shaking, 69
yield enhancement,
economic valuation, 467
factor of production, 467
pollinators, 467
yield loss,
Lissorhoptrus oryzophilus, 1837
rice, 1837
rice water weevil, 1837
seeding rate, 1837

Z

(Z)-3-hexenyl acetate,
attractant, 1009
host preference, 1009
semiochemicals, 1009
trap crops, 1009
(Z)-3-hexenyl acetate, 1009
(Z)-7-tetradecen-2-one,
Anomala orientalis, 659
Exomala, 659
pheromone dispensers, 659
Vaccinium corymbosum, 659
(6Z,9Z)-tricosadiene,
detection, 1460
invasive species, 1460
Stenoma catenifer, 1460
(9Z)-9,13-tetradecadien-11-ynal, 1460
(9Z)-9,13-tetradecadien-11-ynal, 1460
detection, 1460
invasive species, 1460
Stenoma catenifer, 1460
(6Z,9Z)-tricosadiene,
Zea mays,
bioassay, 558
Diabrotica virgifera virgifera, 558
host search behavior, 558
zebra chip disease,
chemical control, 1032
IPM, 1032
potato, 1032